

4-1968

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CENTRAL WASHINGTON STATE COLLEGE

60-4

# GRADUATE CATALOG

*1968 - 1969*



60-4



*McConnell Auditorium*

## GRADUATE CATALOG - CENTRAL WASHINGTON STATE COLLEGE ELLENSBURG

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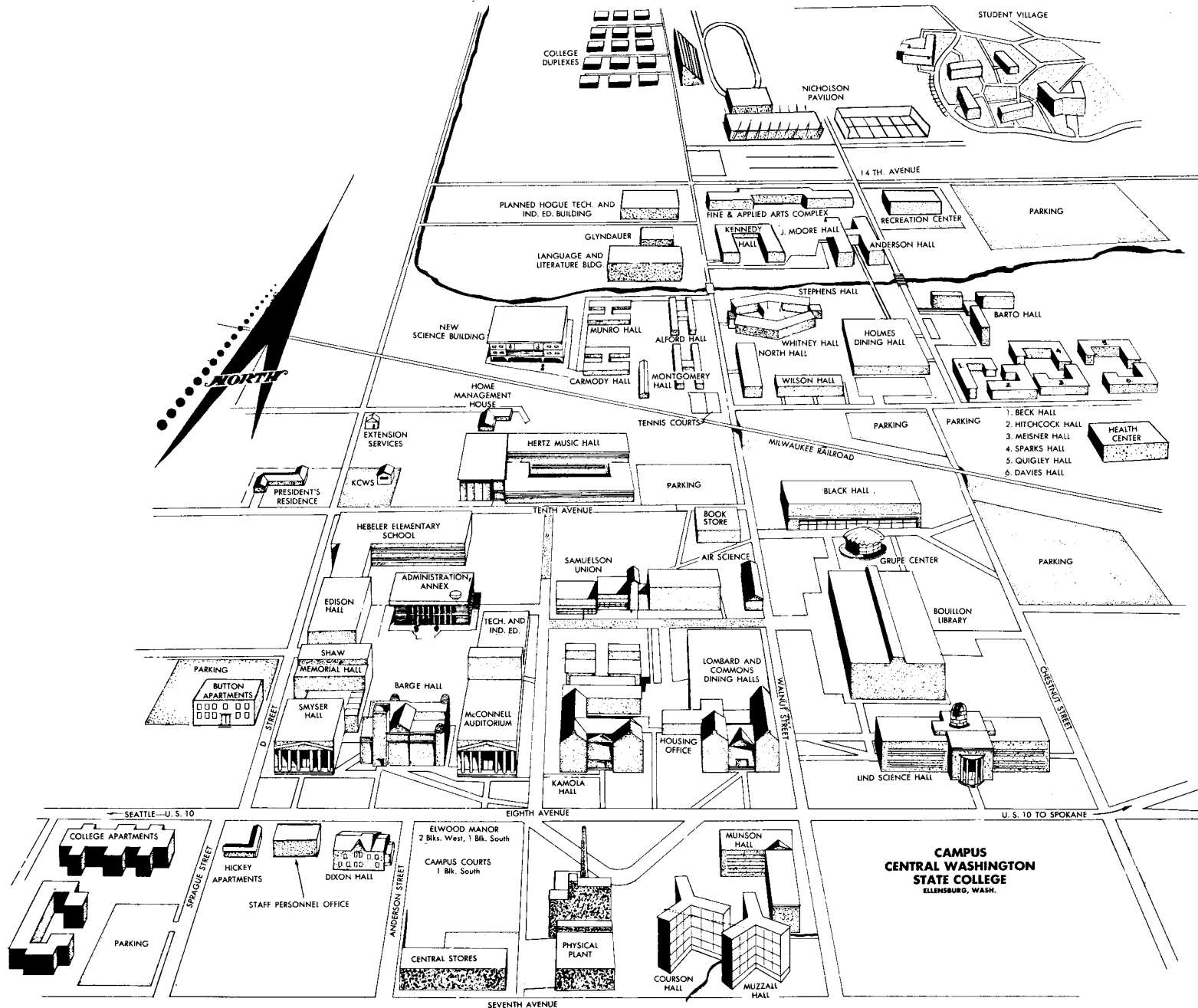
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# COLLEGE CALENDAR

## 1968-1969

### Fall Quarter, 1968

Last Day to File Applications and Full Registration Fee	
Refund for Fall Quarter	Monday, August 5, 1968
Registration for Graduates and Seniors	Monday, September 23
Registration of Juniors and Sophomores	Tuesday, September 24
Registration for Freshmen	Wednesday, September 25
Instruction Begins	Thursday, September 26
Class Schedules May be Changed	Thursday, October 3
Homecoming	Friday, October 25
Veteran's Admissions Day Holiday	Monday, November 11
Thanksgiving Holidays	1 p.m. Wednesday, Nov. 27-Dec. 2
Opening Date of Final Examinations	Monday, December 9
Fall Quarter Closes	5 p.m. Friday, December 13

### Winter Quarter, 1969

Last Day to File Application and Full Registration Fee	
Refund for Winter Quarter	Friday, December 6, 1968
Registration for All Students	Monday, Tuesday, Wednesday, January 6, 7, 8
Instruction Begins	Thursday, January 9
Class Schedules May be Changed	Thursday, January 16
Washington's Birthday Holiday	Friday, February 21
Washington's Birthday	Saturday, February 22
Opening Date of Final Examinations	Monday, March 10
Winter Quarter Closes	5 p.m., Friday, March 14

### Spring Quarter, 1969

Last Day to File Application and Full Registration Fee	
Refund for Spring Quarter	Friday, March 7, 1969
Registration for All Students	Monday, Tuesday, Wednesday March 24, 25, 26
Instruction Begins	Thursday, March 27
Class Schedules May be Changed	Thursday, April 3
Symposium	April 16, 17, 18, 19
Memorial Day Holiday	Friday, May 30
Opening Date of Final Examinations	Monday, June 2
Spring Quarter Closes	5 p.m. Friday, June 6
Degree Candidate Grades Due	3 p.m. Friday, June 6
Commencement Exercises	10 a.m. Saturday, June 7

### Summer Session, 1969

#### First Term

Registration for First and Second Term	Monday & Tuesday, June 16-17
Class Instruction Begins	Wednesday, June 18
Independence Day	Friday, July 4

#### Second Term

Instruction Begins	Friday, July 18
Second Term Closes	Friday, August 15

# Directory of Personnel

## College Board of Trustees

Archie S. Wilson, Chairman . . . . . Richland  
Herbert L. Frank, Vice Chairman . . . . . Yakima  
Joseph Panattoni . . . . . Ellensburg  
Mrs. Hugh Minor . . . . . Everett  
Roy P. Wahle . . . . . Bellevue

## Administration

President . . . . . James Eugene Brooks, Ph.D.  
    Secretary to the President . . . . . Mrs. Owen Paul  
    Assistant to the President and Special Assistant Attorney  
        General . . . . . Thomas Killin Dalglish, LL.B.  
Dean of Administration . . . . . John N. Terrey, Ed.D.  
    Director of Institutional Research . . . . . Dr. Robert E. Krebs, Ed.D.  
    Director of Information . . . . . Howard H. Shuman, M.A.  
        Assistant—Journalism, news . . . . . William Fay Chamberlin, M.A.  
        Assistant—Journalism  
            photography . . . . . John Philip Foster, M.S.  
    Alumni Director . . . . . Gary L. Hall, M.S.  
Dean of Faculty (acting) . . . . . Eldon E. Jacobsen, Ph.D.  
    Dean of Arts and Sciences . . . . . Cornelius Willet Gillam J.D., Ph.D.  
    Assistant Dean . . . . . Bernard Loyal Martin, Ph.D.  
    Department Chairmen  
        Biological Sciences . . . . . Philip Conrad Dumas, Ph.D.  
        Chemistry . . . . . Helmi Habib, Ph.D.  
        Economics and Business Administration . . . . . Lawrence Alonzo Danton, Ph.D.  
        English . . . . . Karl Edwin Zink, Ph.D.  
        Foreign Languages . . . . . Odette Golden, Ph.D.  
        Geography . . . . . Martin Richard Kaatz, Ph.D.  
        History . . . . . Walter Louis Berg, Ph.D.  
        Mathematics . . . . . Robert Yost Dean, Ph.D.  
        Philosophy . . . . . Chester Zigler Keller, Ph.D.  
        Physics, (acting) . . . . . Robert Curtis Mitchell, Ph.D.  
        Political Science and  
            Anthropology (acting) . . . . . James McKenzie Alexander III, M.S.  
        Sociology . . . . . Virgil Jerome Olson, Ph.D.  
        Speech and Drama . . . . . Jon Meyer Ericson, Ph.D.  
            Director, Speech Hearing Clinic . . . . . Walter L. LaDue, Ph.D.  
    Director, Honors . . . . . Raeburne Seeley Heimbeck, Ph.D.  
    Director, Humanities . . . . . Raymond Albert Smith, Ph.D.  
    Director, Interdisciplinary Seminars . . . . . Elwyn Hope Odell, Ph.D.  
    Director, Southeast Asia Program . . . . .  
Dean of Education . . . . . John Albert Green, Ed.D.  
    Assistant Dean . . . . . Donald Myron Schliesman, Ed.D.  
    Department Chairmen  
        Aerospace Studies . . . . . Lt. Col. Richard E. McCarty, M.Ed.  
        Art . . . . . Louis Adolph Kollmeyer, Ed.D.  
        Business Education and Administrative Management . . . . . Eugene John Kosy, Ph.D.  
        Education . . . . . Conrad Harold Potter, Ed.D.  
        Hebeler Elementary School . . . . . Richard John Lee Covington, Ed.D.  
        Home Economics . . . . . Luther Baker, Ph.D.



Music .....	Wayne Snyder Hertz, Ed.D.
Physical Education .....	Albert Harold Poffenroth, M.S.
Psychology .....	Joseph Ellis Rich, Ed.D.
Student Teaching .....	Ralph Donald Gustafson, Ed.D.
Technology and Industrial Education .....	Ronald Martin Frye, Ed.D.
Dean of Graduate Studies and Summer Session .....	Richard Anthony Nevé, Ph.D.
Assistant to the Dean .....	Andrew L. Driscoll, M.S.
Director of Research and Development .....	Robert E. Krebs, Ed.D.
Director, Community College Relations .....	John N. Terrey, Ed.D.
Director of Continuing Education .....	David Paul Dillard, M.A.
Assistant .....	Derward Herbert Tozer, M.Ed.
Director of Libraries .....	George H. Fadenrecht, M.A.
Assistant Director of Libraries—Public Services .....	
Assistant Director of Libraries—Audiovisual .....	
Registrar and Director of Admissions .....	Enos Edwin Underwood, M.Ed.
Associate Director of Admissions .....	Lonald Lawrence Bridges, M.Ed.
Assistant Registrar .....	Robert Vance Davidson, M.Ed.
Admissions Officer .....	
Credentials Supervisor .....	Patricia Anne Ross, B.A.
Director of Athletics .....	Adrian Lee Beamer, M.Ed.
Chairman, Symposium and Visiting Professors .....	David Burt, M.A.
Dean of Students .....	Younger Theodore Witherspoon, Ph.D.
Assistant Dean of Students .....	Jack Randolph Spithill, M.A.
Dean of Men .....	Donald Everet Wise, Ed.D.
Dean of Women .....	Marybelle Chase Rockey, M.A.
Director of Auxiliary Services .....	Wendell Donald Hill, B.B.A.
Bookstore Manager .....	Thomas Francis Hruska, B.S.
Director of Food Service .....	Ray Morton Ayers
Director of Counseling and Testing Service .....	Robert Stanford Miller, Ed.D.
Director of Student Activities and College Union .....	App Davis Legg, M.Ed.
Assistant Director .....	Kenneth Burda, B.A.
Director of Placement .....	Benjamin Dean Owens, M.A.
Director of Student Health Services .....	Jack Behrman, M.D.
College Nurse .....	Mrs. Maxine Taylor, R.N.
Business Manager (acting) .....	Lloyd Laurel Buckles, B.S.
Director of Financial Aids and Development .....	Perry Howard Mitchell, M.A.
Financial Aids Officer .....	John Bert Liboky, M.A.
Comptroller .....	
Chief Accountant .....	Clarence Moncrief, B.A.
Budget Officer .....	Carroll Ross, B.A.
Budget Analyst .....	Vernon LaBay
Payroll Supervisor .....	Allen Ray McGraw, B.S.
Internal Auditor .....	
Director of Physical Plant .....	Paul Barton Bechtel, B.S.
Assistant Director .....	Theodore Porter, B.S., B.A.
Campus Safety Officer .....	Donald Redlinger, B.A.
Director of Staff Personnel .....	Robert Lyle Howser, B.B.A.
Purchasing Agent .....	Donald Paul Jongeward
Director of Campus Planning and Programming .....	Urban Allen Eberhart
Space Analyst .....	Michael H. Tornow, B.A.
Director of Data Processing .....	Richard Duane Chase

# General Information

## Location

Central Washington State College, one of five state four-year institutions, is located in Ellensburg, the geographical center of the State of Washington.

Ellensburg is a city of 11,600 population situated at the foot of the Cascade Mountains in the beautiful Kittitas Valley. It is 105 miles southeast of Seattle and 36 miles north of Yakima.

## History

Central Washington State College was founded by the first Washington legislature in 1890 as Washington State Normal School. The School opened in 1891 with four faculty and 86 students. It occupied the second floor of the Washington Public School in Ellensburg.

In 1933 the legislature authorized the College to grant the B.A. degree. In 1937 the name was changed to Central Washington College of Education. The 1947 legislature authorized B.A. degrees in Arts and Sciences and the Master of Education degree. Since 1949 more than 1,000 master's degrees have been granted in 31 fields of specialization.

The latest name change—to Central Washington State College—was made in 1961. Dr. James E. Brooks became the eighth president of the College in that year. The 1963 legislature authorized M.A. and M.S. degrees; the 1967 legislature authorized the B.S. degree. Today the faculty approaches 400 and the enrollment exceeds 6,000 students.

## Accreditation

The College is fully accredited by the Northwest Association of Secondary and Higher Schools.

The National Council for Accreditation of Teacher Education has fully accredited the College to prepare elementary and secondary school teachers and school service personnel (principals, guidance counselors, and school psychologists) with the master's degree the highest degree approved.

Central also has been approved by the United States Attorney General as an institution for non-quota immigrant students.

## Bouillon Library

The Victor J. Bouillon Library is a convenient and unusually attractive place for study and research. A staff of experienced librarians, audiovisual experts, and other specialists are on duty to assure competent service.

The Library holds these resources: printed materials in 122,000 volumes including books, periodicals, and newspapers; government publications, 49,150; maps, 8,478; microfilm reels, 1,636; microprints, 335; and microfiche, 5,098. All materials are accessible to students on open shelves in or adjacent to comfortable reading areas. The Music Library includes more than 3,200 phonograph records and albums. Special collections of archives, maps, and the Herbert C. Fish Memorial Library of Pacific Northwest History. Audiovisual materials, including 2,546 motion picture films, 1,288 filmstrips, 72 sound filmstrips, 23 filmstrip series, 205 slide sets plus 563 tapes. Representative teaching machines and programs are also available. All materials are available without cost to students in their instructional and research work at the College. Included also are Closed Circuit Television, headquarters of television for educational purposes, the Instructional Materials Production Laboratory, the Tape Learning Laboratory, and the Curriculum Laboratory.

## Elementary School Library

Elementary School Library is located on campus in Hebel Elementary School. An attractive library, it serves the needs of the school and also gives prospective teachers and teacher librarians opportunity to observe the important role of a well-equipped library in elementary education.

## Expenses\*

### Tuition

	<i>Per Quarter</i>
Residents of Washington . . . . .	\$19.00
Out-of-state students . . . . .	57.00

### General Fees

All regular students enrolled during fall, winter, and spring quarters pay a general fee each quarter to assist in the support of such programs as library, student and alumni activities, construction and operation of facilities for

\* All costs are subject to change.

student living and services, and other regular college functions. Fees are:

	<i>Per Quarter</i>
Residents of Washington....	\$ 69.00
Out-of-state students .....	100.00

### Board and Room

(Charges for those who live in residence halls for the entire academic year.)

Quarter	(1)	(2)	(3)	(4)	(5)	(6)
Prepayment (8)	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40†
Fall .....	280	307	313	320	277	130
Winter ...	230	253	258	264	228	107
Spring ....	189	207	211	216	187	88
	\$699	\$767	\$782	\$800	\$692	\$325 (7)

- (1) Carmody and Munro Halls
- (2) Kennedy Hall
- (3) Stephens, Whitney, Barto, Anderson, and Moore Halls
- (4) All Other Residence Halls
- (5) Cooperative-Student Village
- (6) Single Student in Apartments—Per Student & Charge
- (7) Room Only
- (8) The \$40 is applied to the last quarter of residence hall charges

Single Rooms—Students who live in a room without a roommate are charged an additional \$2.00 per week.

The charges for each quarter for those who live in residence halls only Winter and Spring quarters or only Spring quarter will be the amounts listed above for Winter quarter.

NOTE: Summer fees and room and board costs are different. Write for Summer Session Bulletin.

## Housing

Housing for both single and married students is available both on and off campus. Inquiries should be directed to the Director of Auxiliary Services.

†To be paid when applying.

## Graduate Assistants, Head Residents

Two types of part-time positions are available to graduate students.

**Graduate Assistantships:** Available to those working for the master's degree. The assistants are paid from \$175 to \$275 a month, with the larger amount requiring more work and a lightened academic load. Assignments are made to faculty on the basis of applicant's background. Write to the Dean of Graduate Studies for further information and application forms.

**Head Resident Positions:** The residence hall program at Central is designed to create a climate of individual creative thought and action, at the same time developing a mature understanding of new found freedoms and the responsibilities of residence hall and college life.

Several head resident and assistant head resident positions are available to qualified single or married graduate students who plan to work on the master's degree. These positions pay from \$60 to \$275 per month for 10 months and include a furnished apartment. Head residents may take up to 12 hours of graduate credits each quarter. The head resident is responsible for the personnel functions of the hall and for certain administrative duties. Write to the Dean of Students for further information and application forms.

**Resident Assistantships:** There are a limited number of resident assistantships available for women. For further information write to the Dean of Women.

## Summer Session

Central Washington State College provides substantial undergraduate programs and nearly complete graduate programs during the nine-week session. The summer bulletin, issued annually, may be secured by writing to the Director of Summer Session.



# Graduate Study

## Admission to Graduate Study

To enroll for graduate credit one must:

1. Have earned a bachelor's degree, or
2. Be within twelve (12) credits of earning a bachelor's degree and in the final quarter of undergraduate work. Courses not needed for the undergraduate degree may be taken for graduate credit if arrangements are made with the Dean of Graduate Studies during the first week of the quarter in which the work is taken. Students entering Central Washington State College for the first time must contact the Admissions Office for instructions and required forms.

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NOTE: Admission to the College as a graduate student gives the opportunity to enroll for graduate credit and should not be interpreted to mean admission to any of the Master's Degree Programs. See page 11 for general instructions and page 12 for instructions regarding admission to the M.A. or M.S. programs and page 17 for instructions regarding admission to M.Ed. program.

## Courses

Courses numbered 300 and 400 are open to graduate students, seniors, and juniors. Courses numbered 500 and 600 are open to graduate students only. Course descriptions are printed in the *General Catalog*. Courses are listed in this catalog beginning on page 30.

## The Graduate Study Programs

Central Washington State College offers several graduate study programs to meet the advanced educational needs of persons who hold a bachelor's degree. These include the master of arts, master of education, master of science, fifth-year and principals' credentials.

## General Regulations

The following regulations apply to all master's programs. Refer to the Master of Arts and Sciences or the Master of Education for additional requirements (language, residence, thesis, etc.)

### Responsibility of Students

The graduate student is expected to know the requirements for the master's degree. The Office of the Dean of Graduate Studies and the faculty will try to aid in all possible ways, but

the responsibility for any errors of enrollment or interpretation of the requirements remains with the student.

### Advisement

The graduate student must be assigned an adviser by the department in which he is specializing. The adviser will serve until the student is approved for admission to the Master's degree program.

After admission, the student's thesis committee is submitted to and approved by the Dean of Graduate Studies. The committee will consist of at least three persons. Two members must be from the student's major department. The student's graduate committee will be responsible for approving courses and other details to complete degree requirements, directing and approving the thesis, and conducting the final examination.

### Residence Requirement

A minimum of three quarters in residence is required, two of which must be at Central Washington State College following admission to the master's degree program. However, additional residence requirements may be required by some academic departments in their programs.

A quarter of residence is defined as the completion of a minimum of 10 credits of class load during the regular quarter or a full summer session.

### Graduate Record Examination

All graduate students must take the Graduate Record Examination before admission to candidacy. This includes the verbal and quantitative tests, and the area of specialization. These tests are prepared by the Educational Testing Service and are administered quarterly on the campus through the Counseling and Testing Service.

### Student Load

Normal graduate load shall not exceed 15 credits. Any exceptions must be approved by the chairman of the major department and Dean of Graduate Studies.

### Transfer of Credit

A maximum of fifteen quarter credits for approved courses may be transferred from other institutions which offer graduate degrees. Approval of transfer credit shall be made by the major department and the Graduate Office only upon presentation of a written request by the student.

**Maximum Time Limit**

No credit earned more than six (6) years before the date of the degree award may be counted as part of the degree credit requirement except as may be approved by formal action of the Graduate Study Committee.

**Scholastic Standards**

Grades for all courses taken as part of the degree program must average at least 3.0 (B). Credit will not be accepted for courses in which a grade lower than "C" is earned but such grades will be used in calculating the grade point average. If the grade point average remains below 3.0 after 30 credits of graduate work, candidacy for the degree will be terminated. Credit for pass/fail courses is given with the approval of the Department Chairman and the Dean of Graduate Studies.

**Final Examination**

After a student has registered for courses which will complete the master's degree pro-

gram, he must pass oral and/or written examinations covering courses, seminars and thesis or such other examinations as stated necessary to complete degree requirements.

An application for final examination, approved by the committee, must be filed in the Office of the Dean of Graduate Studies at least three weeks in advance of the examination. Final examinations are conducted by the candidate's committee and are open to the faculty. However, the committee alone shall decide upon the merit of the candidate's performance.

**Graduation**

Commencement exercises are in June at the close of the regular school year. Candidates for the master's degree are expected to participate in the commencement exercises following the granting of the degree regardless of the quarter in which they complete degree requirements.

## Sequence of Procedures For Master's Degree

**Prior to first quarter of graduate work:**

1. Students not in residence at Central Washington State College must apply for admission to college through the Admissions Office.
2. File application for admission to master's degree program with the Graduate Office.
3. File two official copies of transcripts for each college previously attended (other than CWSC). One copy of each to the Admissions Office and one copy of each to the Graduate Office. (Note: The Admissions Office will not copy and distribute transcripts from other institutions.)

**First quarter:**

1. Complete the Graduate Record Examination.
2. Secure permission of the department in which master's degree will be completed.
3. Submit approved course of study (on appropriate forms) to Graduate Office. Three copies.
4. Make a tentative decision concerning the nature of the thesis and the faculty advisory committee. After final decision, the signatures of committee members are submitted to the Dean of Graduate Studies for approval.
5. Complete requirements for admission to the master's degree program.

6. Submit thesis prospectus to committee for approval. The Thesis Problem Approval Form may meet departmental prospectus requirements.

**Second Quarter:**

1. Submit approved thesis prospectus to the Graduate Office.
2. If the thesis involved a survey or questionnaire, advance permission must be obtained. Check with the Graduate Office for correct procedure.
3. Secure a copy of the forms and information pertinent to completion of thesis and other degree requirements. Copies are available at the Graduate Office.

**FINAL QUARTER**

1. Ask the Graduate Office for a complete evaluation to insure that all requirements are being met.
2. Pick up copy of FINAL QUARTER PROCEDURE FORMS from the Graduate Office.
  - a. Secure committee approval of final thesis draft and submit approved draft to typist for final typing three weeks before the end of the quarter.
  - b. Consult with committee members to determine a convenient time and date for the oral examination. (Oral examination may require two hours.)

- c. Schedule oral examination and request reservation of a room for the oral examination at the Graduate Office.
- d. Submit final copy of thesis to each committee member for review 4 days prior to oral examination.
- e. Submit a "Brief" to the Graduate Dean and each committee member.
- f. Complete oral examination.
- g. Submit report of oral examination and grade for thesis to the Graduate Office along with three final copies of thesis (ready for binding).
- h. Submit authorization for application for a master's degree (issued by Graduate Office) to the Registrar.
- i. Submit fee card (issued by Registrar) to the Cashier and pay necessary fees.
- j. Submit cashier's receipt and the completed application for the degree to the Registrar.

## Master of Arts and Master of Science Degree Program

### Admission

Formal admission to the master's degree programs is based upon completion of several requirements:

1. Admission to graduate study by Admissions Office. See page — this is NOT the same as admission to the master's degree program.
2. Submission of application for admission to the master's degree program to the Graduate Office. (An application form will be found in the back of this bulletin.)
3. Receipt by the Graduate Office and also by the Registrar's Office of official copies of transcripts covering the baccalaureate degree and any courses taken subsequently.
4. Attainment of satisfactory scholastic level.
  - a. A grade point average of 3.0 or above for the final two years of his undergraduate program.
  - b. The student who does not meet the above requirement may register for a probationary quarter (minimum of 10 credits). If a g.p.a. of 3.0 or better is achieved, the student may petition his major department for recommendation to the Dean of Graduate Studies for admission to the Master of Arts or Master of Science degree programs. Courses taken during the probationary quarter must be at the 500 level or in the field of specialization.
5. Approved course of study by an adviser in the area of specialization submitted to the Graduate Office.

6. Special departmental regulations completed as specified.

### Credits Required

The candidate must complete a minimum of 45 credits in the 300, 400, 500 and 600 groups.

### Thesis Requirement

Each candidate shall satisfy the six-credit thesis requirement. Requirements may vary among departments and departmental regulations should be noted. The thesis shall demonstrate the student's ability to do individual study and to report in writing.

The thesis must conform to standards of typing theses approved by the Graduate Study Committee. Three (3) copies of the completed thesis must be deposited with the Dean of Graduate Studies and the necessary binding fees paid by the student. After binding, two copies remain in the library and one copy is delivered to the student.

### Correspondence and Extension Courses

Credits earned by correspondence or extension shall not apply toward the M.A. degree or the M.S. degree.

### Foreign Language Requirement

Students obtaining the Master of Arts degree must take the foreign language test. The Educational Testing Service (E.T.S.) Foreign Language Examination will be used to fulfill the language requirement for all M.A. programs (and M.S. degrees requiring a language).

### New Programs

New programs leading to a Master of Arts and a Master of Science degree are under con-

sideration but cannot be included in the catalog until final official approval. For further information regarding these programs inquiries should be directed to the Dean of Graduate Studies.

## Master of Arts

### Art

#### Purpose of the Program

To provide graduate level study in the creative and academic areas of the graphic and plastic arts. This study would enable graduate students to (1) pursue some area in art as a professional artist, (2) work as an employee of business and industry, and (3) teach at the secondary, college, or university level.

#### Admission

In addition to general regulations for admission to Master of Arts degree program, admission to the program for Master of Arts in Art will be governed by:

- A. Undergraduate major, or equivalent, in art from an accredited or approved college.
- B. Screening by the Art Department, including appraisal of the candidate's objectives, past experience, and possible promise of success; review of creative work of applicant, and approval by the department to begin the program.

#### The Program

All candidates shall complete 45 credits. A minimum of 33 credits, exclusive of thesis, must be in the field of art with 4-6 credits from other fields.

Required Courses:	<i>Credits</i>
Art 564 Research Procedures in Art . . . . .	3
Art history, aesthetics and criticism in Art. . .	9
Major area of concentration in Art. . . . .	12
Minor area and departmental electives in Art. 9-11	9-11
Art 600 Thesis . . . . .	6
Electives in fields other than Art. . . . .	4-6
	45

The major and minor areas of concentration will be taken from painting, print, drawing, design, sculpture, pottery, jewelry, history of art, and photography.

A minimum of 18 studio credits exclusive of thesis must be taken.

Any variation from the above program in very special situations may be petitioned for action by the Department of Art.

#### Thesis

The thesis may be the usual written type dealing with research in the fields of art or by original creative work of acceptable profes-

sional standards accompanied by a typewritten text, adequately discussing and illustrating the creative work. Candidates selecting the creative thesis may choose any one of the following fields: painting, print making, drawing, design, sculpture, jewelry, pottery, photography.

#### Final Examination

The written examination will be developed on the basis of the candidate's graduate program presented for the degree; the oral examination will concentrate on the thesis, but may also cover other work in the student's graduate program.

A selection of the candidate's work shall be prepared and may be presented in public exhibit.

Examples of each student's creative works are to remain in the permanent possession of the college.

#### Foreign Language Requirement

See foreign language requirement for all M.A.-M.S. candidates. Page 12.

### English

#### Admission

Those requirements established by general regulations covering the Master of Arts degree apply. The student will normally be expected to have completed an undergraduate major in English, but some others may be accepted provisionally by the English Department.

#### The Program

1. Course Requirements:
  - a. A minimum of 33 credits in English, including at least 16 credits at the 500 level and six credits for thesis.
  - b. With the approval of his major advisor the student may elect a maximum of 12 credits in courses other than English.
  - c. Undergraduate courses. Courses on the 400 level, taken under advisement, will be accepted in the program, with the requirements of additional reading and an additional long paper.
2. Procedure Requirements:
  - a. Courses are to be chosen with the help of the major advisor (the Chairman of the Department of English or a faculty member designated by him).
  - b. Completion of a pattern of graduate and undergraduate studies including substantially the following: History and structure of the language, Chaucer, Shakespeare, English and American literature, Criticism, and an approved intensive study.

**Thesis**

- (1) Every M.A. candidate in English must present a satisfactory thesis proposal to his major advisor and advisory committee.
- (2) The final thesis must be written in a form according to graduate school requirements.
- (3) The final thesis must secure the approval of the student's major advisor and advisory committee.

**Foreign Language**

See requirement for all M.A.-M.S. candidates, page 12.

**Examination**

Comprehensive written examination on reading lists completed before the final quarter of graduate work.

**Courses in the Program**

1. Undergraduate courses.  
English courses on the 400 level, taken under advisement, will be accepted in the program, with the requirements of additional reading and an additional long paper.
2. Graduate courses *Credits*

Eng. 501. Research in English.....	4
Eng. 541. 1, 2, 3, 4, 5, 6, 7, 8, 9. Studies in the English Language.....	4 ea.
Eng. 545. 1, 2, 3, 4, 5, 6, 7, 8, 9. Pro-seminar in English Literature.....	4 ea.
Eng. 575. 1, 2, 3, 4, 5, 6, 7, 8, 9. Pro-seminar in American Literature ...	4 ea.
Eng. 591. 1, 2, 3. Literary Criticism. Plato through Arnold .....	4 ea.
Eng. 596. 1, 2, 3. Individual Study.....	1-4 ea.
Eng. 599. 1, 2, 3. English Graduate Seminar .....	4 ea.
Eng. 600 Thesis .....	6

**Music**

**Purpose of the Program**

To increase the candidate's professional competence and his ability for continued self-directed study, and to provide opportunity for greater depth in his chosen area of concentration.

**Admission to the Program**

In addition to general regulations for admission to the Master of Arts degree program, admission to the program for Master of Arts in Music will be governed by:

- A. Graduation with a bachelor's degree from an accredited or approved music school or college with a major in music.
- B. Placement examinations in the fields of performance (applied music) and theory. If necessary, the student will be required to enroll in a review theory course without credit.

**Outline of Requirements and Course Offerings**

All candidates shall complete 45 credits. Thirty-three credits, exclusive of thesis and/or composition or recital, must be in the field of music, with 3 to 6 credits elected from fields other than music. Areas of concentration include a) History and Literature, b) Theory and Composition, and c) Performance. Subject matter in these areas will be selected under the direction of a graduate advisor. Reading knowledge of a foreign language must be satisfied before admission to candidacy.

Required Courses	<i>Credits</i>
Music 521 Methods of Musical Research.....	3
Music History and Literature .....	6
Theory (Analytical techniques, with emphasis on harmony, counterpoint, and form) ..	9
Major Area of Concentration .....	9-12
Music 600 Thesis .....	6
Electives in Music .....	3-6
Electives in Other Fields .....	3-6

**Major Areas of Concentration**

(Select 9 to 12 credits of additional courses in the area of preference.)

Major Areas of Concentration	<i>Credits</i>
Music History and Literature	<i>Credits</i>
Music 450 Literature of Bach .....	3
Music 452 Literature of Beethoven .....	3
Music 458 Vocal Solo Literature .....	3
Music 471 History of Orchestral Music....	3
Music 475 History of Chamber Music .....	3
Music 476 History of Choral Music .....	3
Music 530 Early Keyboard Music through 1750 .....	3
Music 570 History of Vocal Art .....	3
Music 573 History of Opera .....	3
Music 596 Individual Study .....	1-6
Music 599.1, 599.2, 599.3 Seminar in Music History .....	3 ea.
Music 599.4 Seminar—Giuseppe Verdi .....	3
Music 599.5 Seminar—Richard Wagner and the Ring .....	3
Theory and Composition	
Music 441 Keyboard Harmony and Improvisation .....	3
Music 444 Canon and Fugue .....	3
Music 472 Orchestration I .....	3
Music 474 Modern Literature Analysis .....	3
Music 483 Composition I .....	3
Music 484 Band Arranging I .....	3
Music 486 Stage Band Arranging .....	3
Music 490 Harmonic Analysis .....	3
Music 492 Choral Composition and Arranging I .....	3
Music 520 Methods of Teaching Theory.....	3
Music 535 Techniques of Musical Analysis...	3
Music 545 Modern Counterpoint .....	3
Music 580 Orchestration II .....	3
Music 583 Composition II .....	3
Music 584 Composition III .....	3
Music 585 Band Arranging II .....	3
Music 592 Choral Composition and Arranging II .....	3
Music 596 Individual Study .....	3
Performance*	
Music 430 Diction in Singing Foreign Languages .....	3

\*Candidate must enroll for 2 credits of private instruction in his major performing area each of three quarters if his area of concentration is "performance."



Music 491 Choral Interpretation and Techniques .....	3
Music 533 Chamber Music Performance ..	3
Music 541 Conducting III—Choral .....	3
Music 546 Advanced Madrigal Choir .....	3
Music 547A, B, C, D, E Chamber Groups .....	1 ea.
Music 551 Accompaniment and Song .....	3
Music 554D, E Advanced Technique Class—Woodwind, Brass .....	1 ea.
Music 561 Opera Workshop .....	2
Music 564A, B, C, D, E, F, G Applied Music .....	1-2 ea.
Music 567 Choir .....	1
Music 577 Orchestra .....	1
Music 587 Band .....	1
Music 596 Individual Study .....	1-6

**Final Examination**

The candidate must satisfactorily pass oral and/or written examinations based on the course work and thesis.

**Thesis Options**

1. A thesis demonstrating the candidate's ability to do scholarly and significant research in the field of music.
2. A graduate recital with a covering paper, or
3. An original composition with a covering paper.

**Foreign Language Requirement**

See requirement for all M.A.-M.S. candidates. Page 12.

**Master of Science**

**Biology**

**Purpose of the Program**

Several objectives will be met through the offering of the Master of Science degree in Biology. (1) This degree will provide an expanded curriculum which will prepare students to engage themselves in biological careers not normally open to students with an undergraduate major in biology. (2) The program may prepare students for further graduate work leading to the Ph.D. degree. (3) The program will offer more intensive training for secondary and junior college teachers of biology.

**Admission**

In addition to standard requirements for admission to the master's degree program, students are expected to have an appropriate undergraduate background in biology. Normally the undergraduate preparation should be the equivalent of the Arts and Sciences Biology, Botany, or Zoology majors listed in the Central Washington State College *General Catalog*. Deficiencies in the student's undergraduate training as determined by the Department of Bio-

logical Sciences at the time of the student's admission to the graduate program, must be removed without graduate credit during the first year of graduate work.

**The Program**

The course work leading to the Master of Science degree in Biology will total 45 credits in Biology and related subjects. The individual's program will be established in consultation with the student's advisor and will be approved by the Department of Biological Sciences. In selecting related subjects (e.g. chemistry, physics, mathematics) the student's background and interests will be considered. Bio. Sci. 598 and 599, seminars, are required of all graduate students.

**Thesis**

A six-hour thesis is required. At present the following areas may be selected for thesis problems: Plant Taxonomy, Plant Morphology, Plant Anatomy, Physiology, Aldgology, Ecology, Parasitology, Protozoology, Embryology, Invertebrate Zoology, Microbiology, Mammalogy, Ornithology, Paleontology, Behavior, Ichthyology, Herpetology, and Anatomy.

The thesis must represent original research in one of the areas listed above. The thesis topic must be approved by the Department of Biological Sciences prior to the initiation of the project. Before a student engages in thesis research he must select or be assigned a thesis advisor who also will serve as the chairman of the student's graduate committee.

**Examination**

A candidate must pass a final and/or written examination on all work offered for the degree, on his thesis, and on his field of specialization.

**Chemistry**

**Admission to the Program**

In addition to requirements listed under general regulations, a student must have satisfied the requirement for a baccalaureate degree in chemistry or must have completed acceptable courses in each of the major areas of chemistry. Students with bachelor's degrees in physics, mathematics, or biology who have had the basic courses in chemistry (analytical, inorganic, organic, and physical) will also be eligible for admission to graduate study in chemistry.

Background curriculum should include courses in physics, mathematics through calculus, and preferably a foreign language. A student may be admitted on a provisional basis even though he has not satisfied all require-

ments. Any deficiencies must be removed during the first year of graduate work.

### The Program<sup>ⓐ</sup>

Twenty-one credits from the following areas: (minimum of 3 credits in each area)

Organic Chem. 461, 462, 464, 496, 497, 561, 596

Physical Chem. 496, 497, 581.1, 581.2, 581.3, 596

Analytical Chem. 452, 454, 496, 497, 550, 596

Inorganic Chem. 470, 471, 472, 496, 497, 570.1, 570.2, 596

Biochemistry 496, 497, 500, 501, 502, 505, 596

3 credits seminar—Chem. 598.1, 598.2, 598.3

3-9 credits selected by advisement from the above courses for specialization.

6 credits—Thesis Chemistry 600

6-12 credits in supplementary fields outside the major by advisement.

### Thesis

The six-credit thesis is to be an original experimental effort selected from one of the areas of specialization within the chemistry major. Before a student initiates his thesis research he must select or be assigned a major advisor. This advisor will serve as chairman of the student's graduate committee and director of the research project. The thesis topic may be selected by the student or assigned by the major advisor. The student must submit a detailed outline of his proposed research for approval before initiating the project.

### Foreign Language

Before admission to candidacy the student must show a reading competence in the scientific literature of one foreign language. The languages preferred for selection are German, French, or Russian. Other languages may be considered, but must be approved by the chemistry staff.

### Examination

A candidate must pass a final oral examination on all work offered for the degree. This examination may include a review of course work in addition to the work presented in the thesis. The final examination will be open to all faculty members, but the success or failure will be based only on the decision of the examining committee. The recommendations of other staff members may be taken in advisement if necessary.

## Mathematics

### Purpose of the Program

The primary function of the degree is to strengthen academic training in mathematics. The program provides additional work for mathematicians and mathematics teachers (es-

pecially those entering the community college system) and serves as an intermediate step for students planning to study for the doctorate.

### Admission

For regular admission to the graduate program in the Department of Mathematics a student shall have earned a baccalaureate degree with a baccalaureate degree with a major in mathematics from an accredited college or university. A student with a baccalaureate degree with a major other than mathematics may be admitted to the graduate program by permission of the Department of Mathematics. Any deficiencies for regular admission must be removed during the first year of graduate study.

### The Program

To complete requirements for the degree, the student must:

- Complete 30 quarter hours in mathematics by advisement to include:
  - One course from Math. 599.1, 599.2, 599.3. 3 credits each course.
  - One sequence from each of the two following groups of courses.
    - Math. 561.1, 561.2, 561.3. Modern Algebra. 3 credits each.
    - Math 551.1, 551.2, 551.3. Topology 3 credits each. Math. 571.1, 571.2, 571.3. Theory of Analytic Functions. 3 credits each.
  - Math. 600. Thesis. 6 credits.
- Complete 15 additional quarter hours of electives by advisement. Courses within the Department of Mathematics applicable to the degree.
- Pass a final oral examination on work offered for the degree. This examination may include a review of work in his field of specialization and will include a defense of work presented in the thesis.

### Thesis

The thesis shall demonstrate the following:

- An independent research contribution (original to the student, but perhaps not the field);
- A detailed development of an existing current research topic;
- An application of known results in a new setting;
- A generalization of known results.

### Requirements for Candidacy

To be acceptable as a candidate for the degree the student must have completed 18 credits including 3 credits in Problem Seminar and have submitted an acceptable thesis topic.

<sup>ⓐ</sup>The described program is typical, but variations are possible with consent of the Department of Chemistry and the Dean of Graduate Studies.

## Psychology

### Purpose of the Program

This program is designed to provide instruction for students planning one or more of the following: (1) doctoral study in psychology; (2) junior college and college teaching of psychology; (3) research positions in industry, government, etc.; (4) work in other fields of applied psychology requiring no more than a master's degree.

### Admission

Before admission to candidacy for the M.S. degree, the student must have completed the following courses, or an undergraduate major in psychology including these courses, or have approval of the department chairman. These courses must be apart from his graduate field of specialization.

	<i>Credits</i>
Psy. 362 Elementary Statistics .....	4
Psy. 452 Experimental Psychology of Learning .....	4
Psy. 461 History and Systems .....	5
One of the following:	
Psy. 450 Experimental Psychology of Perception .....	4
Psy. 451 Experimental Psychology of Motivation .....	4
Psy. 453 Theories of Personality .....	5
Psy. 445 Experimental Personality and Social Psychology .....	4

Each student must have all course work which has been completed prior to admission to the graduate program evaluated by the department chairman. This evaluation will be used to prepare a "field of specialization" which, following departmental approval, constitutes the student's graduate program. A master of science degree is awarded upon completion of the 45-credit field of specialization.

### Thesis

Every M.S. candidate in psychology must present a satisfactory thesis prospectus to his chairman and committee, conduct appropriate research, and write up the research according to graduate school requirements and the American Psychological Association Publication Manual. At the time of the final oral examination and thesis defense, the candidate will also present an abstract appropriate for presentation to a professional meeting or journal.

## Counseling Psychology

For the M.S. Counseling field of specialization certain requirements must be completed. The remainder of the student's program is made up of courses selected from a list of guided electives by advisement.

Required Courses	<i>Credits</i>
Ed/Psy. 559.1 Practicum in Counseling .....	2

Ed/Psy. 559.2 Practicum in Counseling .....	4
Ed/Psy. 560 Theories of Counseling .....	4
Psy. 469 Advanced Statistics .....	4
Psy. 562 Theories of Learning .....	5
Psy. 590.1, 590.2, 590.3 Current Issues in Psychology (Take two of three courses, 3 credits each) .....	6
Psy. 599.1, 599.2, 599.3 Seminar in Psychology .....	3
Psy. 600 Thesis .....	6
Guided Electives	
Psy. 444 Tests and Measurements .....	4
Psy. 453 Theories of Personality .....	5
Psy. 471 Vocational Development Theory...	3
Psy. 487 Group Processes and Leadership....	3
Psy. 552 Human Growth and Development, Advanced .....	3
(or select from second year courses)	

A second year beyond the M.S. degree is recommended.

Required Courses	<i>Credits</i>
Psy. 584.1, 584.2, 584.3 Supervised Field Experience in School Psychology. (One credit each course) .....	3
Psy./Ed. 559.2 Practicum in counseling .....	4
Guided Electives	
Psy. 449 Abnormal Psychology .....	4
Psy. 456 Personnel Psychology .....	3
Psy. 488 Group Dynamics and the Individual	3
Psy. 561 Group Counseling .....	3
Psy. 565 Individual Testing: Adolescent and Adult .....	5
Psy. 566 Personality Assessment .....	5
Psy. 568 Experimental Design I .....	3
Psy. 569 Experimental Design II .....	3
Soc. 445 Social Stratification .....	3
Soc. 455 Collective Behavior .....	5
Soc. 470 Contemporary Social Thought ....	4
Anth. 454 Cultural Change .....	4
Phil. 480 Philosophy of Science .....	5
Psy. 571 Family Counseling .....	3

## General Experimental Psychology

Required Courses	<i>Credits</i>
Psy. 568 Experimental Design I .....	3
Psy. 569 Experimental Design II .....	3
Phil. 480 Philosophy of Science .....	5
Psy. 469 Advanced Statistics .....	4
Psy. 562 Theories of Learning .....	5
Psy. 590.1, 590.2, 590.3 Current Issues in Psychology (Take two of three courses, 3 credits each) .....	6
Psy. 599.1, 599.2, 599.3 Seminar in Psychology .....	3
Psy. 600 Thesis .....	6

Students in the General Experimental field of specialization should select electives from 300, 400, or 500 level courses under direction of an advisor from the Psychology Department. Not more than six (6) credits from 300 level courses may apply toward the master's degree.

Suggested Electives	<i>Credits</i>
Psy. 347 Methods of Attitude and Opinion Measurement .....	4
Psy. 378 Physiological Psychology .....	4
Psy. 446 Experimental Personality and Social Psychology .....	4

Psy. 416 Programmed Learning .....	3
Psy. 444 Tests and Measurements .....	4
Psy. 450 Experimental Psychology of Perception .....	4
Psy. 451 Experimental Psychology of Motivation .....	4
Psy. 453 Theories of Personality .....	5
Psy. 473 Experimental Psychology of Thinking .....	4
Psy. 475 Instrumentation of Psychology.....	2
Psy. 476 Comparative Psychology .....	4
Psy. 477 Neurological Basis of Behavior ....	4
Psy. 478 Experimental Physiological Psychology .....	4
Psy. 552 Advanced Human Growth and Development .....	3
Psy. 563 Theories of Perception .....	4
Psy. 567 Theories of Motivation .....	4
Phil. 460 Introduction to Symbolic Logic....	3
Sp. 555 Psycholinguistics .....	4
Math. 380 Principles of Digital Computers and Programming .....	3
Phys. 371 Physical Measurements .....	4
Soc. 465 Methods of Social Research.....	3
Zool. 473 Animal Ecology .....	4
Zool. 475 Ethology .....	4

## Speech Pathology and Audiology

### Purpose of the Program

The Certificates of Clinical Competence of the American Speech and Hearing Association require a master's degree or equivalent. Careers in clinical service centers, hospitals, public schools, colleges and universities, industry, and research centers now commonly require this certification. The graduate program has been designed to meet the certification requirements while giving the student a broad academic and clinical background. It may also prepare a student for study at the doctoral level. The program is flexible enough to allow the student to pursue his own interests and needs.

### Admission

The standard requirements for admission to the college graduate programs, plus a background in speech pathology and audiology. Students without this background will be given the opportunity to make it up, but must expect to spend more than the usual time in completing the degree program.

### The Program

The degree candidate must satisfactorily complete, with a grade point average of 3.0 or higher, 45 credits acceptable to the Graduate School and to the Department of Speech and Drama. At least 15 credits, exclusive of thesis, will be at the 500 level.

Courses will be selected by advisement on the basis of a student's professional interests and the specific work planned following attainment of the advanced degree: clinical activities, research work, teaching, or administrative responsibilities.

Required Courses:	<i>Credits</i>
Sp. 499 Advanced Anatomy and Neurology..	4
Sp. 555 Psycholinguistics .....	4
Sp. 600 Thesis .....	6
Select 19 or more credits from the following courses in Speech Pathology:	
Speech 381 Cleft Palate .....	2
* Speech 445 Psychology of Speech .....	4
Speech 455 Rehabilitation of the Hard of Hearing .....	4
* Speech 460 Childhood Language Disorders..	4
Speech 465 Hearing and Communication ...	4
* Speech 467 Audiometry .....	4
* Speech 471 Voice Disorders .....	4
Speech 480 Therapy for Aphasia .....	3
Speech 491 Diagnostic Methods .....	4
Speech 563 Seminar in Stuttering .....	4
Speech 567.1 Seminar in Audiology .....	4
Speech 567.2 Seminar in Audiometry .....	4
Speech 596 Individual Study .....	4-12

### Examination

A final oral examination is required of each candidate. He must be prepared to defend his thesis and will be subject to questioning over his field of specialization.

### Thesis

A six-credit thesis is required.

\*These courses must be included in the program if they were not included in the undergraduate preparation. A maximum of 12 credits may be selected, with advisement, from courses carrying graduate credit in anthropology, biology, education, linguistics, mathematics, physics, psychology, and sociology.



# Master of Education Degree Program

The Master of Education degree program has been developed mainly for elementary and secondary school teachers and school service personnel. Since the program may also prepare for junior college teaching and for advanced graduate work, the student should seek advice from the department in which he wishes to specialize. Every candidate for the Master of Education degree selects a field of specialization either (1) in an academic area with work beyond the undergraduate major or (2) in a professional area designed to prepare for specialized service in the public schools. Complete information regarding the various fields of specialization will be found later in this bulletin.

## Admission to M.Ed. Program

Formal admission to the master's degree program is based upon completion of several requirements:

1. Admission to graduate study by Admissions Office. See page 12. This is not the same as admission to the master's degree program.
2. Application for admission to the master's degree program. (An application form will be found in the back of this bulletin.)
3. Receipt by the Graduate Office and also by the Registrar's Office of official copies of transcripts covering the baccalaureate degree and any courses taken subsequently.
4. Attainment of satisfactory scholastic level.
  - a. A grade point average of 3.0 or above for the final two years of his undergraduate program.
  - b. The student who does not meet the above requirement may register for a probationary quarter (minimum of 10 credits). If a g.p.a. of 3.0 or better is achieved the student may petition his major department for recommendation to the Dean of Graduate Studies for admission to the Master of Education degree program. Courses taken during the probationary quarter must be at the 500 level or in the field of specialization.
5. Approved course of study by an adviser in the area of specialization submitted to the Graduate Office.

## Credits Required

The candidates must complete a minimum of 45 quarter credits in the 300, 400, 500, and 600 groups. Not less than 27 credits or 60 per

cent of the total required for the degree must be in the 400, 500 or 600 groups.

## Required Professional Courses

Education 507, *Introduction to Graduate Study*, is required of all students earning a Master of Education degree. It is recommended that this course be taken in the first quarter of residence. Other required courses are Education 570, *Educational Foundations*; Psychology 552, *Human Development*—Advanced, and Education 600, *Thesis*.

## Area of Specialization

The area of specialization shall consist of 20 to 30 credits earned in courses approved by the department involved and including thesis. The course of study will follow the design outlined later in this bulletin or as approved by the department and the Dean of Graduate Studies.

## Electives

The remainder of credits needed to complete the required number of credits should be carefully planned on the basis of needs of the candidate. All programs should contain work of both professional and academic nature.

## Thesis Requirement

Each candidate for the Master of Education degree will complete a thesis demonstrating his ability to do independent study and to report in writing. Faculty responsible for individual fields of specialization will determine the types of theses acceptable in the area. The student will submit a prospectus to his committee and have it approved before work is begun and the committee will determine whether the project will be a three-credit or a six-credit thesis at that time.

The thesis report must conform to standards of format and typing approved by the Graduate Study Committee. Three (3) copies of the completed thesis must be deposited with the Dean of Graduate Studies and the necessary binding fees paid by the student. After binding, two copies remain in the library and one copy is delivered to the student.

## Restricted Use of Questionnaire For Thesis Studies

A graduate student who plans to use a questionnaire in connection with his master's degree thesis or project study must have prior approval of his committee and the Dean of Graduate Studies.

### Credits From Extension Course, Workshops, and Correspondence Courses

A maximum of 9 credits earned by extension may be applied toward a Master of Education degree but will not apply toward satisfying the residence requirement. Nor more than two workshops with a combined maximum of 8 credits can be accepted as part of a Master of Education program. Credits earned in correspondence courses may not be applied to the master's degree.

### Teaching Certificate and Experience

The Master of Education degree candidate must have met requirements for a teaching certificate and, with the exception of certain school psychologist candidates, must have completed at least one year of successful teaching experience.

### New Programs

New programs leading to a Master of Education Degree are under consideration but cannot be included in the catalog until final official approval. For further information regarding these programs inquiries should be directed to the Dean of Graduate Studies.

### Fields of Specialization for Master of Education Degree

In order to undertake a field of specialization the student must have completed a minimum of background courses including basic undergraduate preparation for the specified field of specialization. This minimum should be adequate to enable the student to do successfully the work required.

### Administration

#### Elementary Principal

(a) Required	<i>Credits</i>
Ed. 587 Educational Administration . . . . .	5
Ed. 579 Elementary School Principal . . . . .	5
Ed. 551 Elementary School Curriculum . . . . .	3
Ed. 600 Thesis . . . . .	3 or 6
(b) Elect from the following to complete 30 credits in (a) and (b) * . . . . .	11 or 14
Ed. 467 Philosophy of Education . . . . .	3
Ed. 468 History of Education . . . . .	2
Ed. 476 School and Community . . . . .	3
Ed. 487 Group Processes and Leadership . . . . .	3
Ed. 508 Comparative Education . . . . .	3
Ed. 562 Evaluation of the School Program . . . . .	3
Ed. 576 Personnel Relations in Schools . . . . .	3
Ed. 578 Instructional Aids: Administration . . . . .	3
Ed. 582 Internship in School Administration . . . . .	5

Ed. 585 School Supervision . . . . .	5
Ed. 589 School Plant Planning . . . . .	5
Ed. 590 Public School Finance . . . . .	5
Ed. 599A Seminar in Educational Administration . . . . .	3
Psych. 444 Tests and Measurements . . . . .	4
(c) Related Courses . . . . .	9-10
Elect a minimum of nine credits from education and psychology courses.	
(d) Background Courses . . . . .	5-6
Elect a minimum of five credits from among eligible courses in philosophy, history, political science, sociology, literature, or others dealing with Western culture.	

### Junior High Principal

(a) Required	<i>Credits</i>
Ed. 587 Educational Administration . . . . .	5
Ed. 580 Junior High School Principal . . . . .	5
Ed. 452 Junior High School Curriculum . . . . .	3
Ed. 600 Thesis . . . . .	3 or 6
(b) Elect from the following to complete 30 credits in (a) and (b) * . . . . .	11 or 14
Ed. 467 Philosophy of Education . . . . .	3
Ed. 468 History of Education . . . . .	2
Ed. 476 School and Community . . . . .	3
Ed. 487 Group Processes and Leadership . . . . .	3
Ed. 508 Comparative Education . . . . .	3
Ed. 562 Evaluation of the School Program . . . . .	3
Ed. 578 Instructional Aids: Administration . . . . .	3
Ed. 582 Internship in School Administration . . . . .	5
Ed. 585 School Supervision . . . . .	5
Ed. 589 School Plant Planning . . . . .	5
Ed. 590 Public School Finance . . . . .	5
Ed. 599A Seminar in Educational Administration . . . . .	3
Psych. 444 Tests and Measurements . . . . .	4
(c) Related Courses . . . . .	9-10
Elect a minimum of 9 credits from education and psychology courses.	
(d) Background Courses . . . . .	5-6
Elect a minimum of 5 credits from among eligible courses in philosophy, history, political science, sociology, literature, or others dealing with Western culture.	

### Senior High Principal

(a) Required	<i>Credits</i>
Ed. 587 Educational Administration . . . . .	5
Ed. 581 High School Principal . . . . .	5
Ed. 552 Senior High School Curriculum . . . . .	3
Ed. 600 Thesis . . . . .	3 or 6
(b) Elect from the following to complete 30 credits in (a) or (b) * . . . . .	11 or 14
Ed. 467 Philosophy of Education . . . . .	3
Ed. 468 History of Education . . . . .	2
Ed. 476 School and Community . . . . .	3
Ed. 487 Group Processes and Leadership . . . . .	3
Ed. 508 Comparative Education . . . . .	3
Ed. 562 Evaluation of the School Program . . . . .	3
Ed. 576 Personnel Relations in Schools . . . . .	3
Ed. 578 Instructional Aids: Administration . . . . .	3
Ed. 582 Internship in School Administration . . . . .	5
Ed. 585 School Supervision . . . . .	5
Ed. 589 School Plant Planning . . . . .	5
Ed. 590 Public School Finance . . . . .	5
Ed. 599A Seminar in Educational Administration . . . . .	3
Psych. 444 Tests and Measurements . . . . .	4

- (c) Related Courses ..... 9-10  
Elect a minimum of 9 credits from education and psychology courses.
- (d) Background Courses ..... 5-6  
Elect a minimum of 5 credits from among eligible courses in philosophy, history, political science, sociology, literature, or others dealing with Western culture.

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NOTE: The M.Ed. degree does not necessarily qualify the student for the Provisional Principal's Credential. Applicants must meet the requirements for the credential as listed on page 29.

\*Whenever the best interests of the student may be served by making substitutions for courses listed in (b) the student may request the Dean of Graduate Studies to make such substitutions upon the approval of the student's advisor.

## Supervision

### Curriculum Director

Required Courses	<i>Credits</i>
Ed. 487 Group Processes and Leadership ....	3

26 or 29

## Subject Teaching

### Art Education

Prerequisite—undergraduate major, or equivalent, in art.

Evaluation of previous creative work approved by the Department of Art.

#### Required Courses *Credits*

Art 599 Seminar in Art Education .....	2
Art History, select through advisement .....	6-9
Ed. 600 Thesis .....	3-6
The thesis may be the usual written type or take the form of original creative work of acceptable professional standard accompanied by a typewritten text, illustrated and adequately discussing the creative work.	
Select through advisement from the following: 9-19	
Painting—Art 360, 361, 362, 363, 460, 560, 560.2	
Design—Art 373, 470, 570	
Drawing—Art 450, 458, 550	
Sculpture—Art 380, 480, 580, 580.2	
Crafts—Crafts 342, 343, 344, 346, 349	
Pottery—Crafts 362, 462, 562	
Jewelry—Crafts 347, 447, 547	
Art Education—Art 325, 425, 430, 431, 432, 445, 545	
Photography—Art 390, 490, 590	
Printmaking—Art 385, 386, 387, 485, 486, 487, 586, 587	
Individual Study—Art 496, 497, 498, 596, 597, 598; Crafts 496, 497, 498, 596, 597, 598	

A selection of the candidate's work shall be prepared and may be presented in public exhibition.

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### Biology

Prerequisite—undergraduate major in Biology.

Required Courses	<i>Credits</i>
Bio. Sci. 470 Ecology .....	5

Ed. 555 Program of Curriculum Improvement	3
Ed. 562 Evaluation of the School Program ..	3
Ed. 585 School Supervision .....	5
Ed. 600 Thesis .....	3 or 6
Elect at least one of the following: .....	3
Ed. 451 Core Curriculum .....	3
Ed. 452 Junior High School Curriculum ...	3
Ed. 551 Elementary School Curriculum .....	3
Ed. 552 Senior High School Curriculum ...	3
Related Fields: Elect a minimum of six hours from the following: .....	6
Ed. 316 Instructional Materials: Utilization..	5
Ed. 358 Introduction to Guidance .....	3
Ed. 362 Educational and Psychological Statistics .....	4
Ed. 450 Instructional Materials: Production..	3
Ed. 476 School and Community .....	3
Ed. 545 Directed Observation in a Core Class	4
Ed. 574 Adult Education .....	3
Ed. 599C Seminar in Curriculum .....	2
Psych. 444 Tests and Measurements .....	4
Soc. 360 The Community .....	2

Bio. Sci. 598 Biology Seminar .....	1
Bio. Sci. 599 Biology Seminar .....	1
Ed. 600 Thesis .....	3 or 6
Select one course from the following: .....	4-5
Bot. 464 Fresh-Water Algae .....	4
Zool. 311 Cold-Blooded Vertebrates .....	5
Zool. 345 Ornithology .....	5
Zool. 361 Advanced Invertebrate Zoology ...	5
Zool. 435 Mammalogy .....	5
Zool. 445 Avifauna of Washington .....	4
Zool. 472 Natural History of the Vertebrates.	5
Select one course from the following: .....	3-5
Bio. Sci. 370 Microbiology .....	5
Bio. Sci. 365 Experimental Genetics .....	4
Bio. Sci. 570 Cellular Physiology .....	5
Bot. 360 Plant Physiology .....	5
Bot. 460 Plant Pathology .....	3
Bot. 463 Mycology .....	4
Zool. 348 General Vertebrate Embryology ...	5
Zool. 380 Parasitology .....	5
Zool. 470 Advanced Physiology .....	5
Zool. 471 Histology .....	4
Select by advisement from the following to complete 30 credits in the field of specialization—300, 400, or 500 courses in Biology, Botany, and Zoology, Geology 347 or 449 (not both) .....	7-13

30

### Business Education

Courses to be selected on the basis of individual needs and interests after consultation with the advisor and the Chairman of the Department of Business Education and Administrative Management.

Required Courses	<i>Credits</i>
Bus. Ed. 524 The High School Business Education Program .....	3
Bus. Ed. 550 Principles of Business Education	3
Bus. Ed. 580 Seminar in Business Education..	3
Bus. Ed. 595 Research in Business Education .	3
Ed. 600 Thesis .....	6

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Select a minimum of five hours from the following:

Bus. Ed. 371 Office Management	3
Bus. Ed. 373 Practical Duplicating Techniques	2
Bus. Ed. 375 Personal Finance	3
Bus. Ed. 377 Business and Office Procedures III	4
Bus. Ed. 392 Records Management	3
Bus. Ed. 440 Workshop	2-6

Select a minimum of six hours from the following:

Bus. Ed. 346 Internship in Office Occupations	5
Bus. Ed. 424 Methods for Teaching Shorthand and Transcription	3
Bus. Ed. 426 Methods and Materials in Basic Business Subjects	3
Bus. Ed. 445 Coordination of Work Experience in the Office and Distributive Occupations	3
Bus. Ed. 485 Business Report Writing	5
Bus. Ed. 520 Tests and Measurements in Business Education	3
Bus. Ed. 522 Methods for Teaching Secretarial Procedures	3
Bus. Ed. 526 Machine Shorthand for Teachers	5
Bus. Ed. 528 Improvement of Instruction in Typewriting	3
Bus. Ed. 529 Improvement of Instruction in Bookkeeping (offered summer term only)	3

### Chemistry

Prerequisite—undergraduate major in chemistry.

The field of specialization will consist of 30 credits, including a 3 or 6 credit thesis, selected by advisement from Chemistry or related fields. The following courses will be required unless credit in these courses or their equivalents has been previously earned.

	<i>Credits</i>
Chem. 350 Inorganic Chemistry	3
Chem. 365 Biochemistry	3
Chem. 365.1 Biochemistry Lab.	2
Chem. 383 Physical Chemistry	3
Chem. 383.1 Physical Chemistry Lab.	2
Chem. 452 Instrumental Analysis	4

### English

Students who have had a major in English as undergraduates will be expected to strengthen their knowledge of the subject by taking courses in areas where they have had the least work.

Students who have had a minor in English as undergraduates will be expected first to meet the requirements of the undergraduate major. They should then strengthen their knowledge of the subject by 20 or 30 additional hours of English, chosen with the help of the advisor (the Chairman of the Department of English or a faculty member designated by him).

Graduate students concentrating in English are also required to select two reading lists, one in a literary period and one in a genre or literary type **BEFORE THEIR FINAL QUARTER OF GRADUATE WORK**, and to pass a written examination given by the Department of English. Candidates should notify

the Department of English of their intent to take the examination six weeks prior to the time when they wish to be examined.

### Family Life Education

Designed for public school teachers who will offer units or courses in various aspects of family relations or for others who may in some way be dealing with family problems. Open to anyone with the appropriate prerequisites and valid bachelor's degree.

#### Required Courses *Credits*

H. Ec. 394 Modern Problems of the Family	3
H. Ec. 433 Family Life Education	
OR Ed. 433 Family Life Education	3
H. Ec. 590 Research in Family Relations	3
Ed. 600 Thesis	3 or 6

In consultation with the major advisor, select at least fifteen credits from the following courses, including at least 6 credits at the 400-500 level:

Soc. 348 Marriage and the Family	4
Bio. Sci. 365 Genetics	4
Phil. 345 Ethics	5
Ed. 358 Introduction to Guidance	3
H. Ec. 349 Family Clothing	2
H. Ec. 381 Family Finance	3
H. Ec. 391 Consumer Buying OR	
Bus. Ed. 375 Consumer Education	3
Psy. 350 Emotional Growth of Children	3
Soc. 355 Culture and Personality	3
Psy. 447 Psychology of Adolescence	3
H. Ec. 490 Nursery School Lab OR	
Ed. 410 Teaching Nursery School or Kindergarten	3
H. Ec. 492 Child Care and Family Dynamics	3
Psy. 460 Counseling Parents of Exceptional Children	3
Psy. 571 Family Counseling	3
H. Ec. 595 Problems of the Aging	2
Ed. 596, Psych. 596, Soc. 496, H. Ec. 496 Individual Study	1-6
Appropriate seminar and workshops, with approval.	

27-30

### Health and Safety Education

Prerequisite—undergraduate major in Health and Physical Education or in Health and Safety Education.

#### Required Courses *Credits*

P.E. 558 Methods of Research in Health and Physical Education	3
H. Ed. 470 School and Community Health	3
Safety Ed. 437 General Safety Education	3
H. Ed. 499 Seminar in Health and Safety Education	2
Ed. 600 Thesis	3 or 6
Select one of the following courses:	3-5
Bio. Sci. 360 Organic Evolution	3
Bio. Sci. 365 Genetics	3
Bio. Sci. 370 Microbiology	5
Zool. 470 Advanced Physiology	5
Select one of the following courses:	3
H. Ed. 518 Health Ed. in the Elementary Schools	3
H. Ed. 525 Health Ed. in the Secondary Schools	3



H. Ed. 580 Administration and Supervision of Health and Safety Education	3
Safety Ed. 455 Driver and Traffic Safety Ed.	3
Select one of the following courses:	3-5
Psych. 346 Social Psychology	4
Psych. 447 Psychology of Adolescence	4
Ed. 433 Family Life Education	3
Remainder of the required twenty-four credits may be selected from any of the above courses or from others with the consent of the advisor.	
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**History**

Prerequisite—undergraduate major in History.

Required Courses	Credits
Hist. 501 Historiography	5
Hist. 505 Research Seminar in History	5
Ed. 600 Thesis	6
Guided upper division and graduate courses with no more than 5 credits from 300 level courses.	
Electives	14
	30

NOTE: Students are advised to take courses dealing with both Eastern and Western Hemispheres.

**Home Economics**

Prerequisite—undergraduate major in Home Economics Education.

Required Courses	Credits
Ed. 600 Thesis	3 or 6
Select from the following, with emphasis on one or two areas	14-17
Family Economics and Home Management	
Home Ec. 581 Advanced Family Finance	2
Family Relations and Child Development	
Home Ec. 590 Research in Family Relations	3
Home Ec. 595 Problems of Aging	2
Food and Nutrition	
Home Ec. 447 Nutrition and Society	3
Home Ec. 487 Experimental Foods II	2
Home Ec. 587 Gourmet Cooking	3
Home Economics Education	
Home Ec. 520 Supervision in Vocational Home Economics Education	2
Home Ec. 521 Problems in Curriculum Development in Home Economics Education	2
Home Ec. 522 Survey of Literature in Home Economics Education	2
Home Ec. 530 Demonstration Techniques	3
Home Ec. 599 Seminar in Home Economics Education	1-3
Housing and Home Furnishings	
Home Ec. 536 Advanced Home Furnishings	5
Home Ec. 575 History of Home Furnishings	3
Textiles and Clothing	
Home Ec. 455 New Developments in Textiles	3
Home Ec. 550 Recent Developments in Clothing Construction	2
Home Ec. 551 Social Implications of Clothing	2
Home Ec. 555 Original Design	5

NOTE: Endorsement for vocational home economics certification is not accomplished through the master's degree unless the 66 hour broad area major is also completed.

Select with advisement, in supporting areas in social science, art, English, or science	10
	27-30

**Junior High School Broad Area**

Candidates who wish to prepare for or improve their preparation for teaching in block-of-time, common learnings, core curriculum or other unified studies programs in junior high schools should elect this program.

Prerequisite—undergraduate Junior High School Broad-Area Major in Language Arts and Social Science or equivalent preparation.

	Credits
Junior High School Area	6
At least six credits in advanced work dealing with junior high school curriculum, organization, methods and students. Such courses as Ed. 451, Ed. 452, Ed. 545, Ed. 599CC, and Psych. 447 should be considered.	
Language Arts and Social Science Areas	24-27
At least 24 credits in graduate or upper division courses designed to strengthen the student's knowledge of the teaching areas in the junior high school block-of-time program. Candidates will be advised by a junior high school specialist and will take work in areas in which they have had the least work as undergraduates.	
Ed. 600 Thesis	3-6

**Master Teacher**

Designed for elementary classroom teachers.

Candidates in this area of specialization may qualify for positions as demonstration teachers, master teachers, school supervisors, and laboratory school teachers.

Prerequisites—undergraduate minor in professionalized subjects or its equivalent.

	Credits
Select at least one course in curriculum from the following	2-3
Ed. 470 Nongraded Elementary School	2
Ed. 551 Elementary School Curriculum	3
Ed. 555 Program of Curriculum Improvement	3
Select at least two courses in evaluation and guidance from the following	4-7
Ed. 358 Introduction to Guidance	3
Ed. 362 Educational and Psychological Statistics	4
Ed. 459 Teacher-Counseling	3
Ed. 460 Parent-Teacher Conferences	2
Ed. 462 Construction and Use of Classroom Tests	2
Ed. 547 *Supervision of Student Teachers	3
Ed. 562 Evaluation of the School Program	3
Select the balance of credits from these courses in methods and materials	7-14
Art 325 Arts and Crafts, Primary	3
Art 425 Arts and Crafts, Intermediate	3
Art 430 Art in the Elementary School	3
Art 421 Modern Reading Program, Primary	3
Ed. 422 Modern Reading Program, Intermediate	3
Ed. 427 Modern Arithmetic Program, Primary	3

\*Ed. 547 must be taken by laboratory school teachers. Master teachers who cooperate in student teaching programs should also take Ed. 547.

Ed. 428 Modern Arithmetic Program, Intermediate and Upper Grades	3
Ed. 438 Individualizing Instruction	2
Ed. 447 Classroom Teaching Problems	3
Ed. 450 Instructional Aids: Production	3
Eng. 320 Children's Literature	2
Music 323 Choral Music Education	3
Music 325 Instrumental Music Education	3
Music 326 Music in the Classroom	3
P.E. 332 Theory and Practice in Dance (Elem.)	3
P.E. 334 Physical Education Activities for the Elementary School	3
Sci. Ed. 322 Science Education in the Elementary School	3
Soc. Sci. 420 Methods and Materials in the Social Science—Elementary	3
Speech 362 Practice in Creative Dramatics	3
Speech 466 Oral Interpretation of Children's Literature	3
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	23

**Mathematics**

<b>Required Courses</b>		<i>Credits</i>
Math. 461.1 and 461.2 Abstract Algebra or approved substitutes (3 credits each)	6	
Math. 471.1 and 471.2 Advanced Analysis or approved substitutes (3 credits each)	6	
Math. 455.1 and 455.2 Principles of Geometry or approved substitutes (3 credits each)	6	
Ed. 600 Thesis	3 or 6	
Select with advisement, from the following to complete 30 credits in the field of specialization—300, 400, 500 courses in mathematics.	6 or 9	
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**Music**

<b>Required Courses</b>		<i>Credits</i>
Music 490 Harmonic Analysis	3	
Music 482 Instrumental Administration Techniques, OR		
Music 491 Choral Interpretation and Techniques	3	
Music 590 Supervision of Public School Music	3	
Music 364, 464, 564A, B, C, D, E, F, or G Applied Music	3	
Ed. 600 Thesis (may be recital or composition, with covering paper)	3 or 6	
Select three hours from the field of Music History and Literature	3	
Music 450 Literature of Bach	3	
Music 452 Literature of Beethoven	3	
Music 458 Survey of Vocal Solo Literature	3	
Music 471 History of Orchestral Music	3	
Music 475 History of Chamber Music	3	
Music 476 History of Choral Music	3	
Select three hours from the field of Theory	3	
Music 441 Keyboard Harmony and Improvisation	3	
Music 443 Counterpoint II	3	
Music 444 Canon and Fugue	3	
Music 472 Orchestration	3	
Music 474 Modern Literature Analysis	3	
Music 483 Composition I	3	
Music 484 Band Arranging I	3	
Music 492 Choral Composition and Arranging I	3	
Music 494 Elements of Music	3	
Select three hours from the field of Music Education	3	
Music 418 Piano Pedagogy	1	

Music 423 Rhythms for the Elementary School	3
Music 424 General Music in the Junior High School	2
Music 425A, B, C, D, E, F, or G Methods of Teaching Individual Lessons	1
Music 440 Workshops	1-6
Music 480 Double Reed Making	1
Music 481 Instrument Repair	1
Music 485 The Marching Band	3
Music 499 Seminar in Music Education	1-4
Music 541 Conducting III—Choral	3
Music 554D, E Advanced Technique Class, Woodwind and Brass	1
Music 560 Psychology and Guidance in Music Education	3
Music 562 Trends in Music Education	3
Music 596 Individual Study	1-6
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	24-27

**Physical Education**

Prerequisite—undergraduate major in Health and Physical Education or major in Physical Education.

<b>Required Courses</b>		<i>Credits</i>
P.E. 470 Trends in Modern Physical Education	3	
P.E. 558 Methods of Research in Health and Physical Education	3	
P.E. 599 Seminar—Philosophy and Literature in Physical Education	3	
Ed. 600 Thesis	3 or 6	
Select one of the following:	3	
P.E. 444 Management of Equipment	3	
P.E. 445 Physical Education Facilities	3	
P.E. 466 Supervision and Evaluation of Program Planning	3	
P.E. 581 Advanced Administration of Physical Education in High School and Colleges.	3	
Select one of the following:	1-6	
Spec. Ed. 440CCC Camping for Crippled Children Workshop	1-6	
Rec. 460 The School Recreation Program	2	
Rec. 571 Modern Trends in Outdoor Education	3	
P.E. 471 Philosophy of Elementary School Physical Education	3	
P.E. 561 Dance in Education	3	
Remainder of the required twenty-four credits may be selected from any of the above courses or from others with the consent of the advisor.		
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**Science**

Prerequisite—completion of courses specified in the Science major.

Course requirements—30 credits in science courses and thesis to be selected by advisement of the student's committee and from not more than two of the following areas: Chemistry, Physics, Biology, and Geology. (A minimum g.p.a. of 3.0 must be maintained in all science work applicable to the master's degree and a satisfactory examination on course work must be written.)

**Social Science**

Thirty credits in Social Sciences are required and will include credits for the thesis and electives in Social Sciences. (At least 15 hours must be in a field other than the undergraduate major. For students with a broad Social Science major undergraduate, at least 20 hours must be taken in one field.)

**Special Education**

Prerequisite—undergraduate minor in Special Education or experience which would make it possible for part or all of those course requirements to be waived.

Required Courses	<i>Credits</i>
Spec. Ed. 414 Curriculum and Problems of Instruction for Mentally Handicapped . . . .	4
Psych./Spec. Ed. 463 Special Disagnostic Techniques . . . . .	3
Spec. Ed. 467 Maladjusted Children . . . . .	3
Spec. Ed. 499 Seminar in Special Education..	4
Ed. 600 Thesis . . . . .	3 or 6
Guided selection from the following, to bring total of 20 to 30 credits:	
Speech 445 Psychology of Speech . . . . .	2
Art 445 Art for Handicapped Children . . . .	3
P.E. 361 Physical Ed. for Handicapped Children . . . . .	3
Spec. Ed. 440CCH Crippled Children's Workshop OR	
Spec. Ed. 440CCC Camping for Crippled Children . . . . .	4
Psych. 350 Emotional Growth of Children..	3
Spec. Ed. 585 Administration and Supervision of Special Education Programs . . . . .	4
Spec. Ed. 596 Individual Study . . . . .	3
Psych. 449 Abnormal Psychology . . . . .	4
Spec. Ed. 446 Directed Observation . . . . .	3
Spec. Ed. 425 Educating the Slow Learner . . .	3
Spec. Ed. 438 Remedial Reading . . . . .	3

**Speech and Drama**

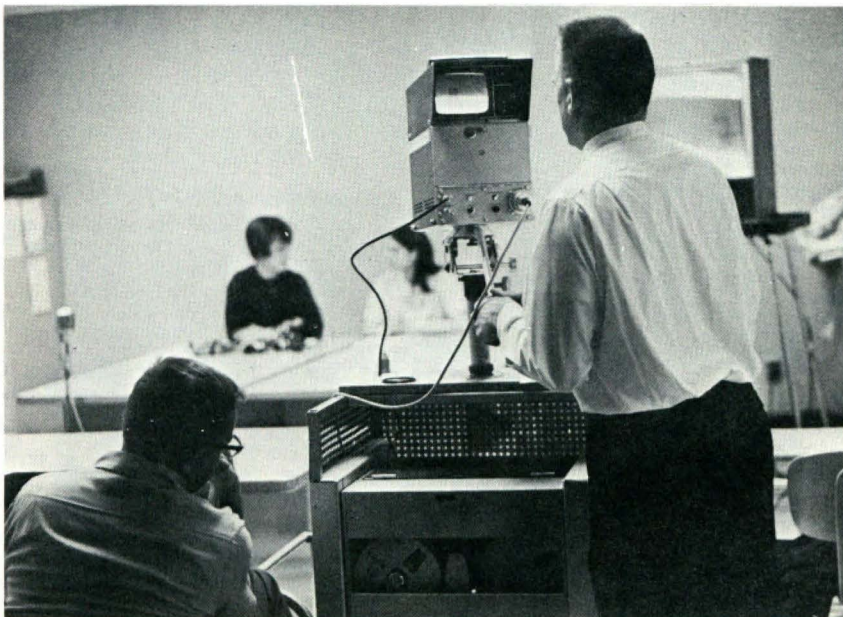
Courses emphasizing Speech Pathology and Audiology, or Theatre and Drama can be selected after consultation with the advisor and the Chairman of the Department of Speech and Drama.

**Technology and Industrial Education**

Prerequisite—undergraduate major in Industrial Education.

Required Courses	<i>Credits</i>
T-IE 559 Seminar in Industrial Education . . .	2
Ed. 600 Thesis . . . . .	3 or 6
Select three credits from the following: . . . . .	3
T-IE 374 Basic Electronics . . . . .	3
T-IE 474 Intermediate Electronics . . . . .	3
Select five credits from the following: . . . . .	5
T-IE 455 General Metals II . . . . .	5
T-IE 555 Advanced Studies in Metal Work..	5
Select five credits from the following: . . . . .	5
T-IE 450 Advanced Furniture Construction..	5
T-IE 550 Advanced Studies in Woodworking..	5
Select three credits from the following: . . . . .	3
T-IE 365 Engineering Drawing . . . . .	3
T-IE 466 Architectural Drawing . . . . .	3
Select with advisement additional courses in Technology and Industrial Education . . . .	4-8
	25-30

NOTE: A minimum of 4 credits must be selected outside the field of Technology and Industrial Education.



## Special Services

### Audiovisual Instructional Aids

	<i>Credits</i>
Prerequisite	
Ed. 415 Instructional Media: Utilization . . . .	5
Required Courses	
Ed. 450 Instructional Media: Production . . . .	3
Ed. 516 Instructional Media: Advanced Theory and Practice . . . . .	3
Ed. 578 Instructional Media: Administration . . . .	3
Ed. 600 Thesis . . . . .	3 or 6
Select at least nine credits from the following courses: . . . . .	9
Ed. 417 Radio and Television in the Classroom . . . .	3
Ed. 449 Audiovisual Electronics . . . . .	3
Ed. 451 Core Curriculum . . . . .	3
Ed. 487 Group Processes and Leadership . . . .	3
Ed. 550 Production of Photographic Instructional Materials . . . . .	4
Ed. 551 Elementary School Curriculum . . . . .	3
Ed. 552 Senior High School Curriculum . . . .	3
Ed. 555 Program of Curriculum Improvement . . . .	3
Ed. 577 In-Service Programs . . . . .	3
Ed. 589 School Plant Planning . . . . .	5
Ed. 590 Public School Finance . . . . .	5
Art 385 Serigraphy . . . . .	3
Art 390 Advanced Photography . . . . .	3
Lib. Sci. 360 Cataloging and Classification . . . .	4
Lib. Sci. 470 School Library Administration . . . .	3

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### Reading Specialist

Prerequisite—completion of Education 322, Teaching of Reading; Education 420, Teaching the Language Arts; and English 320, Children's Literature or Pre-Adolescent and Adolescent Literature.

	<i>Credits</i>
Required Courses	
Spec. Ed. 338 Remedial Reading . . . . .	3
Psych. 420 Psychology of Reading . . . . .	5
Ed. 426 Studies and Problems in Reading . . . .	3
Ed. 600 Thesis . . . . .	3 or 6
Select one of the following:	
Ed. 419 Reading Readiness . . . . .	2
Ed. 421 Modern Reading Program, Primary . . . .	3
Ed. 422 Modern Reading Program, Intermediate . . . . .	3
Select one of the following:	
Ed. 416 Programmed Learning . . . . .	3
Ed. 438 Individualizing Instruction . . . . .	2
Select one of the following:	
Ed. 423 Reading Problems in the Secondary School . . . . .	3
Ed. 424 Reading in Content Fields . . . . .	3
Complete a minimum of 28 credits in the field of specialization. Selection may be made from the following or from any course not already taken above:	
Eng. 340 Introduction to Linguistics . . . . .	5
*Ed. 585 School Supervision . . . . .	5

### School Counseling

In addition to the general regulations for admission to the M. Ed. degree programs, the

\*Recommended if candidate plans to become a Reading Supervisor.

student specializing in School Counseling is expected to have completed the following courses, or an undergraduate major in psychology including these courses, or have consent of the department chairman. The student may not receive credit for these courses in his graduate field of specialization.

	<i>Credits</i>
Prerequisites	
Ed. 358 Introduction to Guidance . . . . .	3
Psy. 362 Elementary Statistics . . . . .	4
Psy. 444 Tests and Measurements . . . . .	4
Psy. 452 Experimental Psychology of Learning . . . . .	4

One-year (45 credits) and two-year (90 credits) graduate programs in school counseling have been designed. A Master of Education degree is awarded upon completion of the one-year program. The policy statements of the American Personnel and Guidance Association and the Associations for Counselor Education and Supervision indicate an adequate program for preparation for school counselors should include two years of graduate education. We support these statements to the extent that we provide provisional endorsement for employment in school counseling upon completion of a two-year program.

	<i>Credits</i>
Required Courses	
Ed. 507 Introduction to Graduate Study . . . .	3
Ed. 570 Educational Foundations . . . . .	3
Psy. 552 Human Growth and Development, Advanced . . . . .	3
Psy. 453 Theories of Personality . . . . .	5
Psy. 560 Theories of Counseling . . . . .	4
Ed./Psy. 559.1 Practicum in Counseling . . . .	2
Ed./Psv. 559.2 Practicum in Counseling . . . .	2-12
Psy. 598.1, 598.2, 598.3 Seminar in Counseling and School Psychology . . . . .	1 ea.
Ed. 600 Thesis . . . . .	6
Electives . . . . .	12*

A second year, beyond the M.Ed., is required for full recommendation:

	<i>Credits</i>
Required Courses	
Ed./Psy. 559.2 Practicum in Counseling . . . .	4
Psy. 584.1, 2, 3 Supervised Field Experience in Counseling . . . . .	1 ea.
Electives . . . . .	3-4

### School Librarian

Persons pursuing this Master of Education degree specialization must either have completed the undergraduate Instructional Materials Minor or complete the requirements listed

\*Electives will be selected with advisement so that courses in the areas suggested by the policy statements of the A. P. G. A. and A. C. E. S. are completed. These areas include: Philosophy, Measurement and Evaluation, Vocational Development Theory, Counseling Theory, Statistics and Research, Group Procedures, Professional Relationships and Ethics, Program Development and Management, Supervised Practice, Related Disciplines.

in that minor prior to or concurrently with this specialization.

	<i>Credits</i>
Library 460 Advanced Cataloging and Classification .....	3
Library 418 Reference in Subject Areas .....	4
Library 470 School Library Administration ..	3
Education 450 Instructional Media: Production .....	3
Education 555 Program of Curriculum Improvement .....	3
Education 600 Thesis .....	3 or 6
Select at least 3 or 6 credits from the following courses:	
Library 490 Historical Survey of Books and Libraries .....	3
Speech 446 Oral Reading of Children's Literature .....	3
Art 342 Exhibit Techniques .....	2
Library 485 Research and Bibliography .....	2
Education 577 In-Service Programs .....	3
Education 550 Production of Photographic Instructional Materials .....	4
	25

### School Psychology

Prerequisite—undergraduate major in psychology or its equivalent.

The new State Board of Education standards for school psychologists require 15 or more credits of professional education courses including (1) directed laboratory experience, (2) education of exceptional children, (3) organization of school system facilities and their relation to community facilities. These requirements make it possible for the College to recommend for school psychologists' positions those who have special training in this field

but who do not have full teacher certification. The professional education requirements can also be completed through the regular teacher education program.

A *provisional* school psychologist's certificate may be granted when course work for the Master of Education degree, exclusive of thesis, has been completed. A standard school psychologist's certificate may be granted after one year of supervised experience, a second year of successful experience as a school psychologist, and completion of the master's degree.

	<i>Credits</i>
Ed. 507 Introduction to Graduate Study .....	3
Ed. 570 Educational Foundations .....	3
Psych. 444 Tests and Measurements .....	4
Psych. 449 Abnormal Psychology .....	4
OR	
Psych. 457 Psychology of Exceptional Children .....	3
Psych. 453 Theories of Personality .....	5
Psych. 560 Theories of Counseling .....	4
Psych. 564 Mental Testing: Individual Child ..	5
Psych. 565 Mental Testing: Individual Adolescent and Adult .....	5
Psych. 552 Human Growth and Development: Advanced (opt.) .....	3
Psych./Ed. 487 Group, Leadership and Group Processes .....	3
Psych./Spec. Ed. 463 Special Diagnostic Techniques .....	3
Psych. 559 Practicum in School Psychology ..	15
Psych. 562 Theories of Learning .....	5
Psych. 566 Personality Assessment .....	5
Psych. 598.1, 598.2, 598.3 Seminar in Counseling and School Psychology (1 credit each quarter) .....	3
Ed. 600 Thesis .....	6
(At least 45 quarter hours must be taken during graduate study.)	



# Fifth Year of Study For Standard Teaching Certificates

Graduation from Central Washington State College with a Bachelor of Education degree entitles the student to the Provisional Teaching Certificate, a license to teach in the schools of Washington for three years. It is renewable for an additional three-year period before being converted to the Standard Teaching Credential.

The philosophy of the fifth year of teacher education is interpreted to mean that the year will consist of 45 quarter credits of work taken after completion of requirements for the Provisional Teaching Certificate. Credits counted toward completion of fifth-year requirements must be identified with the following objectives of the fifth year:

- a. To strengthen areas of weakness discovered during the first year of teaching.
- b. To begin preparing for a future specialized educational role.
- c. To fulfill institutional requirements by taking:
  1. Fifteen credits in subject matter area(s) related to his teaching field(s) and/or his major. An academic major must be completed during the fifth year if not completed as part of the undergraduate program.
  2. Seven and one-half credits from an approved list of professional courses.
- d. Any undergraduate requirements that were delayed by special action.
- e. Electives to broaden one's general education.

Some points to be remembered are:

1. Renewal for the second three-year period requires completion of a minimum of 12 quarter credits and one year of successful teaching.
2. Conversion to the Standard Teaching Certificate requires completion of a fifth year of teacher education. Two years of successful teaching experience are also required. Of the total credits earned:
  - a. Normally not more than 15 credits may be applied to 5th year requirements prior to the first year of teaching. Such credits must be approved upon petition to the Assistant Dean of Education.
  - b. A maximum of 12 credits may be earned by correspondence and/or extension.
  - c. At least one-half of the total credits must be 300 level or above.
  - d. Twenty-two and one-half (22½) credits are to be earned in residence in a single institution.
3. The student may choose any accredited college for completion of his fifth year. If the college chosen is in Washington, that college will be responsible for recommendation for the Standard Certificate. If the college chosen is outside Washington, Central Washington State College must be consulted prior to development of the program and will be responsible for recommending the certificate.
4. A candidate may begin the fifth year following issuance of the Provisional Teaching Certificate or during the quarter in which requirements for the certificate are completed.
5. The State Board of Education allows six calendar years for conversion of the Provisional Teaching Certificate to the Standard Teaching Certificate. Therefore, a time limit of six years is observed on course work credited toward completion of the fifth year. Any exceptions must be approved upon petition to the Assistant Dean of Education.
6. Qualified students may organize their fifth year of study to include work toward the Master of Education, Master of Arts or Master of Science degree. Such programs should be carefully planned with the Dean of Graduate Studies and the Assistant Dean of Education.
7. The fifth-year program outlined above is designed for the student who is progressing normally through Washington's current teacher education program, who holds a valid Provisional Teaching Certificate, and who is seeking a regular Standard Teaching Certificate. Others should consult the Credentials Supervisor in the Registrar's Office concerning requirements.

# Special Certificates

Preparation for certain special certificates, authorized by the State Board of Education, is available at Central Washington State College. Among these certificates are the Principals' Credentials and the School Psychologist's Credential.

Those interested in other special certificates should write to the Department of Certification, c/o State Board of Education, Olympia, Washington.

## Principal's Credentials: Elementary, Secondary, and General

Central Washington State College has been authorized to recommend issuance of provisional and Standard Principal's Credentials valid for service as vice principal or principal of elementary, junior high, and/or high schools. The program includes study in school administration, supervision, and curriculum along with in-the-school administrative experiences; and meets requirements established by the State Board of Education.

Requirements for the provisional credential include:

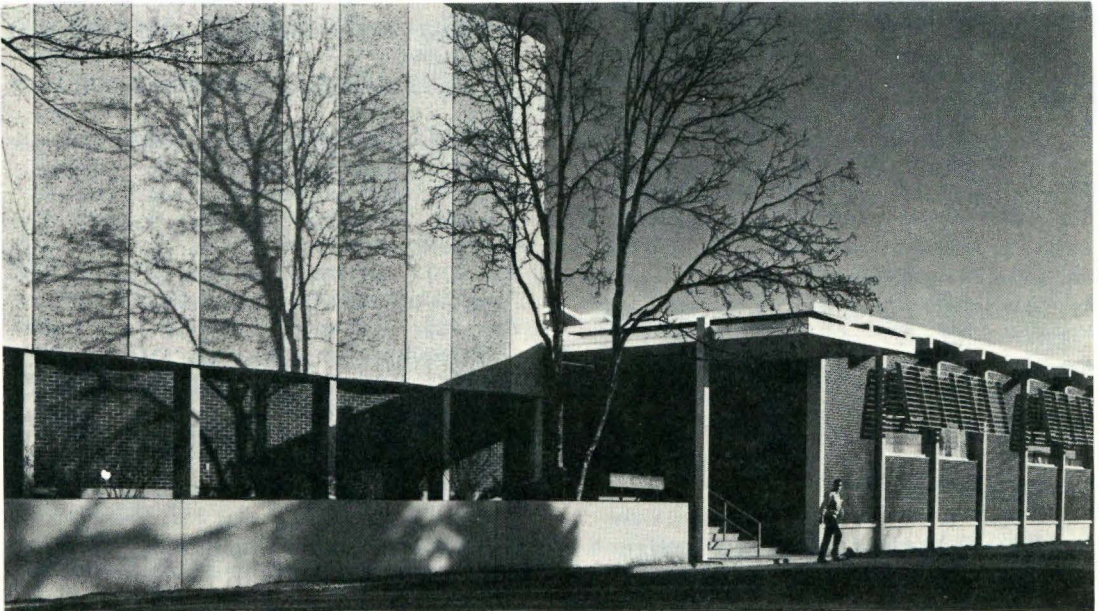
1. Possession of a valid teacher's certificate.
2. Admission to the master's degree program.
3. A minimum of nine credits beyond the fifth year.
4. A minimum of 24 credits beyond the bachelor's degree in an approved program including course work in administration, supervision, curriculum, etc.

5. Field experiences of such nature that the candidate has become personally involved in the duties and responsibilities connected with the principalship. (Internship.)
6. A minimum of three years successful teaching experience at the appropriate level or levels.

Requirements for the standard credential include:

1. Three years experience as a principal.
2. Twelve credits earned after issuance of the provisional credential and after consultation with the Superintendent of Schools and the College.
3. Completion of a master's degree.

Persons seeking further information are invited to correspond with the office of the Director of Administrative Interns, Education Department.



*Hertz Music Hall*

# Course Listings \*

## 300 Level and Above

### Anthropology

- Anthro. 343. Ethnology of Africa. 4 credits.
- Anthro. 344. Ethnology of Asia. 4 credits.
- Anthro. 347. Indian Cultures of North America. 4 credits.
- Anthro. 355. Culture and Personality. 3 credits.
- Anthro. 360. Methods in Archaeology. 4 credits.
- Anthro. 361. Old World Prehistory. 4 credits.
- Anthro. 365. North American Archaeology. 4 credits.
- Anthro. 373. Studies in Primate Social Behavior. 4 credits.
- Anthro. 377. Theories of Race. 2 credits.
- Anthro. 441. Comparative Ethnology. 4 credits.
- Anthro. 445. Peasant Societies and Cultures. 4 credits.
- Anthro. 447. Religion of Primitive Societies. 4 credits.
- Anthro. 448. Non-Western Political and Economic Organization. 4 credits.
- Anthro. 451. History and Theory of Anthropology. 4 credits.
- Anthro. 454. Cultural Change. 4 credits.
- Anthro. 457. Applied Anthropology. 4 credits.
- Anthro. 471. Fossil Man. 4 credits.
- Anthro. 484. Ethnology and Cultural Problems of Southeast Asia. 2 credits.
- Anthro. 496. Individual Study. 2-4 credits.

### Art

- Art 325. Arts and Crafts, Primary. 3 credits. Prerequisite, Art 100.
- Art 342. Exhibit Techniques. 2 credits.
- Art 348. Ancient and Medieval Art. 3 credits.
- Art 349. Art and Modern Living. 2 credits.
- Art 360. Oil Painting. 3 credits. Prerequisite, Art 261.
- Art 361. Oil Painting. 3 credits. Prerequisite, Art 360 or consent of instructor.
- Art 362. Water Color. 3 credits. Prerequisite, Art 263.
- Art 363. Advanced Water Color. 3 credits. Prerequisite, Art 362.
- Art 371. Advanced Layout and Design. 5 credits. Prerequisites, Art 271, 277.
- Art 372. Production Techniques in Advertising Art. 5 credits. Prerequisite, Art 371.
- Art 373. Interior Design. 3 credits. Prerequisite, Art 150, 170.
- Art 377. Advanced Lettering. 2 credits. Prerequisite, Art 277.
- Art 380. Sculpture. 3 credits. Prerequisite, Art 281.
- Art 385. Serigraphy. 3 credits. Prerequisite, Art 150, 170.
- Art 386. Collagraph. 3 credits. Prerequisite, Art 170, 250.
- Art 387. Intaglio Printmaking. 3 credits. Prerequisite, Art 287.
- Art 390. Photography. 3 credits. Prerequisite, Art 290.
- Art 425. Arts and Crafts, Intermediate. 3 credits. Prerequisite, Art 100.
- Art 430. Art in the Elementary School. 3 credits. Prerequisite, Art 100 or permission of instructor.
- Art 431. Art in the Junior High School. 3 credits.
- Art 432. Art in the High School. 3 credits.
- Art 440. Workshop. 1-6 credits.
- Art 445. Art for Handicapped Children. 3 credits.
- Art 448. Renaissance through Nineteenth Century Art. 3 credits.
- Art 450. Advanced Drawing. 3 credits. Prerequisite, Art 250.
- Art 451. Contemporary Art. 3 credits.
- Art 452. Art of the Americas. 2 credits.
- Art 453. Art in the United States. 3 credits.
- Art 456. Art of the Orient and Near East. 3 credits.
- Art 457. African and Oceanic Art. 2 credits.
- Art 458. Life Drawing. 2 credits. Prerequisite, two courses of drawing.
- Art 459. Art of Southeast Asia. 2 credits.
- Art 460. Advanced Painting. 3 credits. Prerequisite, Art 360.
- Art 470. Advanced Design. 3 credits. Prerequisite, Art 270.
- Art 480. Advanced Sculpture. 3 credits. Prerequisite, Art 380.
- Art 485. Advanced Serigraphy. 3 credits. Prerequisite, Art 385.
- Art 486. Advanced Collagraph. 3 credits. Prerequisite, Art 386.
- Art 487. Advanced Intaglio Printmaking. 3 credits. Prerequisite, Art 287, 387.
- Art 490. Advanced Photography. 3 credits. Prerequisite, Art 390.
- Art 495. Travel Study. 2-8 credits.

\*Descriptions in General Catalog.



- Art 496, 497, 498. Individual Study. 2 credits each.
- Art 499. Art Seminar. 2 credits. Prerequisite, art major or permission of instructor.
- Art 545. Administration of the School Art Program. 3 credits.
- Art 548. Art Since 1945. 3 credits.
- Art 550. Advanced Life Drawing. 3 credits.
- Art 560. Advanced Studies in Painting. 2-5 credits. Prerequisite, Art 460 or equivalent.
- Art 560.2. Advanced Studies in Painting. 3-5 credits. Prerequisite, 5 credits of Art 560 or equivalent.
- Art 561. Media and Techniques. 3 credits.
- Art 564. Research Procedures in Art. 3 credits.
- Art 570. Advanced Studies in Design. 2-5 credits.
- Art 580. Advanced Studies in Sculpture. 5 credits. Prerequisite, Art 480.
- Art 580.2. Advanced Studies in Sculpture. 3-5 credits. Prerequisite, 5 credits of Art 580 or equivalent.
- Art 585. Advanced Studies in Printmaking. 3-5 credits. Prerequisite, either Art 486 or Art 487.
- Art 586. Relief Print. 2 credits. Prerequisite, Art 285 and an additional printmaking course.
- Art 587. Advanced Studies in Intaglio. 3 credits. Prerequisite, Art 487.
- Art 590. Advanced Studies in Photography. 2-5 credits. Prerequisite, Art 490 or equivalent.
- Art 595. Seminar in Aesthetics and Criticism. 3 credits.
- Art 596, 597, 598. Individual Study. 2 credits each.
- Art 599. Seminar in Art Education. 2 credits.
- Art 600. Thesis. 1-6 credits. May be scheduled for 3 credits each of two terms.

## Aviation

- Av. 351. Introduction to Aviation. 2 credits.
- Av. 352. Air Navigation. 3 credits.
- Av. 353. Meteorology. 3 credits.
- Av. 354. Theory of Flight. 2 credits.
- Av. 355. Aircraft Structures, Categories, and Power Plants. 5 credits. Prerequisite, Aviation 354.
- Av. 371. Elementary Flight Laboratory. 1 credit. Prerequisite, Aviation 351 (may be taken concurrently).

- Av. 372. Intermediate Flight Laboratory. 1 credit. Prerequisites, Aviation 352 (may be taken concurrently), and 371.
- Av. 373. Advanced Flight Laboratory. 1 credit. Prerequisite, Aviation 353 (may be taken concurrently), and 372.
- Av. 422. Aerospace Education. 3 credits. Prerequisites, 10 credits in aviation or permission.
- Av. 440.0-9. Workshop, Aviation and Space Education. 1 to 6 credits.

## Biological Science

- Bio. Sci. 347. Paleontology. 5 credits. Prerequisite, ten hours of biology.
- Bio. Sci. 365. Genetics. 4 credits. Prerequisite, Bio. Sci. 112.
- Bio. Sci. 370. Microbiology. 5 credits. Prerequisite, Bio. Sci. 112 and Chem. 162 or 172.
- Bio. Sci. 395. Impact of Science on Society. 4 credits.
- Bio. Sci. 411. Soil Microbiology. 5 credits. Prerequisite, Bio. Sci. 370.
- Bio. Sci. 447. Invertebrate Paleontology. 5 credits. Prerequisite, Bio. Sci. 112.
- Bio. Sci. 449. Paleobotany. 5 credits. Prerequisite, Bio. Sci. 111.
- Bio. Sci. 455. Paleoclimatology. 4 credits. Prerequisite, permission of instructor.
- Bio. Sci. 470. Ecology. 5 credits. Prerequisite, one year of college biology.
- Bio. Sci. 480. Limnology. 5 credits. Prerequisite, Chem. 162 or 172; and Bio. Sci. 112.
- Bio. Sci. 485. Modern Developments in Evolution. 3 credits. Prerequisite, Bio. Sci. 365 or permission of instructor.
- Bio. Sci. 490. Biological Principles for Teachers. 5 credits.
- Bio. Sci. 496, 497. Individual Study. 2 to 4 credits each course.
- Bio. Sci. 565. Experimental Genetics. 4 credits. Prerequisites, 15 credits in biology including Bio. Sci. 365 and permission of the instructor.
- Bio. Sci. 570. Cellular Physiology. 5 credits. Prerequisites, Zool. 372 and Chem. 360.
- Bio. Sci. 575. Microbial Physiology. 5 credits. Prerequisites, Bio. Sci. 370 and Chem. 365.
- Bio. Sci. 576. Comparative Morphology and Physiology of the Higher Bacteria. 4 credits. Prerequisites, Bio. Sci. 370 and Chem. 360 or 361.
- Bio. Sci. 596, 597. Individual Study. 2 to 4 credits each course.
- Bio. Sci. 598, 599. Biology Seminar. 1 credit each.
- Bio. Sci. 600. Thesis. 1-6 credits.

## Botany

- Bot. 341. General Plant Ecology. 5 credits. Prerequisite, Bio. Sci. 111.
- Bot. 350. Ornamental Trees and Shrubs. 3 credits. Prerequisite, Bio. Sci. 111 or permission of instructor.
- Bot. 358. Plant Anatomy. 5 credits. Prerequisite, Bio. Sci. 111.
- Bot. 360. Plant Physiology. 5 credits. Prerequisite, Bio. Sci. 111 and Chem. 360.
- Bot. 363. Plants of Washington. 3 credits. Prerequisite, Bio. Sci. 111 or permission of the instructor.
- Bot. 375. Plant Geography. 4 credits. Prerequisite, permission of instructor.
- Bot. 441. Advanced Plant Ecology. 5 credits. Prerequisite, Bot. 341.
- Bot. 448. Advanced Plant Physiology. 4 credits. Prerequisite, Bot. 360.
- Bot. 450. Agrostology. 3 credits. Prerequisite, Bot. 263.
- Bot. 451. Selected Studies in Botany. 3 credits. Prerequisite, 10 hours of botany.
- Bot. 460. Plant Pathology. 3 credits. Prerequisite, Bio. Sci. 111.
- Bot. 461. The Plant Kingdom. 5 credits. Prerequisite, Bio. Sci. 111.
- Bot. 462. Comparative Morphology of Vascular Plants. 5 credits. Prerequisite, 10 credits in botany.
- Bot. 463. Mycology. 4 credits. Prerequisite, Bio. Sci. 111.
- Bot. 464. Fresh-Water Algae. 4 credits. Prerequisite, eight credits of biology including one course in botany.
- Bot. 496, 497. Individual Study. 2 to 4 credits each course.
- Bot. 600. Thesis. 1-6 credits.

## Business Administration

- Bus. Admr. 310. Machine Accounting. 2 credits. Prerequisite, Bus. Admr. 251.
- Bus. Admr. 320. Managerial Accounting Analysis. 3 credits. Prerequisite, Bus. Admr. 252.
- Bus. Admr. 324. Financial Accounting Analysis. 3 credits. Prerequisite Bus. Admr. 252.
- Bus. Admr. 325. Transportation and Distribution Management. 4 credits.
- Bus. Admr. 335. Principles of Production. 4 credits.
- Bus. Admr. 341. Business Law. 5 credits.
- Bus. Admr. 346. Advanced Business and Economic Statistics. 3 credits.
- Bus. Admr. 350. Intermediate Accounting I. 5 credits.

- Bus. Admr. 351. Intermediate Accounting II. 5 credits.
- Bus. Admr. 352. Cost Accounting. 5 credits.
- Bus. Admr. 356. Income Tax Accounting. 5 credits.
- Bus. Admr. 359. Federal Taxation. 5 credits.
- Bus. Admr. 366. Principles of Marketing. 4 credits.
- Bus. Admr. 368. Marketing Middleman. 4 credits.
- Bus. Admr. 370. Business Finance. 4 credits. Prerequisite, Bus. Admr. 251.
- Bus. Admr. 372. Real Estate. 4 credits.
- Bus. Admr. 374. Investments for Beginners. 2 credits.
- Bus. Admr. 377. Principles of Insurance. 5 credits.
- Bus. Admr. 379. Collective Bargaining. 3 credits.
- Bus. Admr. 380. Management Decision Making. 5 credits.
- Bus. Admr. 381. Personnel Management. 4 credits.
- Bus. Admr. 383. Business Cycles. 4 credits. Prerequisite, Bus. Admr. 246; and junior standing.
- Bus. Admr. 410. Applications of Digital Computers. 4 credits. Prerequisites, Math. 150, Bus. Admr. 252, and 346 or permission of the instructor.
- Bus. Admr. 435. Production Management. 4 credits. Prerequisite, Bus. Admr. 335.
- Bus. Admr. Advanced Accounting. 5 credits. Prerequisite, Bus. Admr. 252.
- Bus. Admr. 453. Accounting Theory. 5 credits. Prerequisite, Bus. Admr. 351.
- Bus. Admr. 454. Auditing. 5 credits. Prerequisite, Bus. Admr. 351.
- Bus. Admr. 456. Advanced Income Tax Accounting. 5 credits. Prerequisite, Bus. Admr. 356.
- Bus. Admr. 461. Principles of Advertising and Sales Management. 5 credits. Prerequisite, Bus. Admr. 366.
- Bus. Admr. 468. Marketing Problems. 4 credits. Prerequisite, Bus. Admr. 366.
- Bus. Admr. 469. Market Research. 4 credits. Prerequisites, Bus. Admr. 246 and 366.
- Bus. Admr. 475. Investments. 4 credits. Prerequisite, Bus. Admr. 370.
- Bus. Admr. 496, 497. Individual Study. 2 or 3 credits each course.

## Business Education

- Bus. Ed. 321. Methods in Business Education. 5 credits.

- Bus. Ed. 346. Internship in Office Occupations. 5 credits.
- Bus. Ed. 371. Office Management. 3 credits.
- Bus. Ed. 373. Practical Duplication Techniques. 2 credits.
- Bus. Ed. 375. Personal Finance. 3 credits.
- Bus. Ed. 376. Business and Office Procedures II. 4 credits. Prerequisite, Bus. Ed. 151, 142 or equivalent.
- Bus. Ed. 377. Business and Office Procedures III. 4 credits. Prerequisite, Bus. Ed. 142 or 151, Bus. Ed. 146 or Bus. Adm. 251 or equivalents.
- Bus. Ed. 392. Records Management. 3 credits.
- Bus. Ed. 420. Methods and Materials for Teaching Bookkeeping and Accounting. 3 credits.
- Bus. Ed. 424. Methods for Teaching Shorthand and Transcription. 3 credits.
- Bus. Ed. 425. Typewriting Methods. 3 credits.
- Bus. Ed. 426. Methods and Materials in Basic Business Subjects. 3 credits.
- Bus. Ed. 440. Workshop. 1 to 6 credits.
- Bus. Ed. 445. Coordination of Work Experience in the Office and Distributive Occupations. 3 credits.
- Bus. Ed. 485. Business Report Writing. 5 credits. Prerequisite, Bus. Ed. 285.
- Bus. Ed. 496. Individual Study. 2 credits.
- Bus. Ed. 520. Tests and Measurements in Business Education. 3 credits.
- Bus. Ed. 522. Methods for Teaching Secretarial Procedures. 3 credits.
- Bus. Ed. 524. The High School Business Education Program. 3 credits.
- Bus. Ed. 526. Machine Shorthand for Teachers. 5 credits. (summer session only).
- Bus. Ed. 528. Improvement of Instruction in Typewriting. 3 credits. (summer session only).
- Bus. Ed. 529. Improvement of Instruction in Bookkeeping. 3 credits. (summer session only).
- Bus. Ed. 550. Principles of Business Education. 3 credits.
- Bus. Ed. 580. Seminar in Business Education. 3 credits.
- Bus. Ed. 595. Research in Business Education. 3 credits.
- Chem. 361, 362, 363. Organic Chemistry. 3 credits each course. Prerequisite, Chemistry 183 and 185.
- Chem. 361.1, 362.1, 363.1. Organic Chemistry Laboratory. 2 credits each course. Prerequisite, registration in Chemistry 361.
- Chem. 365. Biological Chemistry. 3 credits. Prerequisite, Chem. 360 or equivalent.
- Chem. 365.1. Biological Chemistry Laboratory. 2 credits. Prerequisite, enrollment in Chem. 365.
- Chem. 381. Physical Chemistry. 4 credits. Prerequisite, Chem. 183 and Chem. 185, Physics 163 and Math. 271.3.
- Chem. 382, 383. Physical Chemistry. 3 credits each course. Prerequisite, Chemistry 381.
- Chem. 382.1, 383.1. Physical Chemistry Laboratory. 2 credits each course. Prerequisite, registration in Chem. 382.
- Chem. 452. Instrumental Analysis. 4 credits. Prerequisites, Chemistry 251 and 383.
- Chem. 454. Introduction to Spectroscopy. 3 credits. Prerequisite, previous or current enrollment in Chemistry 363 and Chemistry 383.
- Chem. 461, 462. Advanced Organic Chemistry. 3 credits each course. Prerequisites, Chem. 363 and Chem. 383.
- Chem. 464. Organic Preparations. 3 credits. Prerequisite, Chem. 363.
- Chem. 470. Radiochemistry. 3 credits. Prerequisite, Chemistry 383.
- Chem. 470.1. Radiochemistry Laboratory. 2 credits. Prerequisite or co-requisite, Chem. 470.
- Chem. 471. Chemistry of the Transition Elements. 3 credits. Prerequisites, Chem. 350.
- Chem. 472. Inorganic Preparations. 3 credits. Prerequisite, Chem. 350.
- Chem. 496, 497. Individual Study. 2 to 4 credits each course.
- Chem. 498.1, 498.2, 498.3. Individual Research. 2 credits each course. Prerequisite, consent of staff.
- Chem. 500, 501, 502. Advanced Biochemistry. 3 credits each course. Prerequisite for Chem. 500, Chem. 365 or permission.
- Chem. 505. Biochemical Methods. 3 credits. Prerequisite, Chem. 500.
- Chem. 550. Advanced Analytical Chemistry. 3 credits. Prerequisite, Chem. 452.
- Chem. 561. Advanced Topics in Organic Chemistry. 3 credits. Prerequisite, Chem. 383 and Chem. 462.
- Chem. 570.1, 570.2. Advanced Inorganic Chemistry. 3 credits each course. Prerequisite, Chem. 350.

## Chemistry

- Chem. 350. Inorganic Chemistry. 3 credits. Prerequisite, Chem. 383.
- Chem. 360. Elementary Organic Chemistry. 5 credits. Prerequisite, 8 credits in college chemistry.

- Chem. 581.1, 581.2, 581.3. Advanced Topics in Physical Chemistry. 3 credits each course.
- Chem. 596. Individual Study. 3 credits.
- Chem. 598.1, 598.2, 598.3. Graduate Seminar. 1 credit each course.
- Chem. 600. Thesis. 1-6 credits.

## Crafts

- Crafts 342. Advanced Wood. 2 credits. Prerequisite, Crafts 242.
- Crafts 343. Advanced Plastics and Glass. 2 credits. Prerequisite, Crafts 243.
- Crafts 344. Advanced Crafts—Metal and Leather. 3 credits. Prerequisite, Crafts 144.
- Crafts 346. Advanced Fabrics. 2 credits. Prerequisite, Crafts 246.
- Crafts 347. Jewelry. 3 credits.
- Crafts 348. Lapidary. 2 credits.
- Crafts 349. Enameling. 2 credits.
- Crafts 362. Pottery. 3 credits. Prerequisite, Crafts 262.
- Crafts 447. Advanced Jewelry. 2 credits. Prerequisite, Crafts 347.
- Crafts 462. Advanced Pottery. 3 credits. Prerequisite, Crafts 362.
- Crafts 496, 497, 498. Individual Study. 2 credits each.
- Crafts 547. Advanced Studies in Jewelry. 2-5 credits. Prerequisite, Crafts 447.
- Crafts 562. Advanced Studies in Ceramics. 2-5 credits.
- Crafts 596, 597, 598. Individual Study. 2 credits each.

## Early Childhood Education

- ECE 309.0. Child Development I. 4 credits.
- ECE 309.1. Child Development II. 4 credits. Prerequisite, ECE 309.0 or Home Economics Major.
- ECE 309.2. Child Development III. 4 credits. Prerequisites, Ed. 307, ECE 307, ECE 309.0, and ECE 309.1.
- ECE 330. Field Study: Early Childhood. No credit. Prerequisites, Ed. 314 and ECE 309.2.
- ECE 420. Parent Education. 3 credits. Prerequisites, ECE 309.2 or Psy. 309.
- ECE 435. Curriculum Enrichment for Young Children. 5 credits. Prerequisite, ECE 309.2.
- ECE 438. The Nursery School. 3 credits. Prerequisites, ECE 309.2 and permission. Concurrent enrollment in ECE 442.1.
- ECE 439. Teaching in the Kindergarten. 4 credits. Prerequisites, ECE 435 and Ed. 314.

- ECE 442.1. Practicum Experience in the Nursery School. 4 credits. Prerequisite, ECE 435. Concurrent enrollment in ECE 438.
- ECE 495. Studies in Early Childhood Education. 3 credits. Prerequisite, ECE 309.2 or Psy. 309.

## Economics

- Econ. 345. Current Issues in Economics. 2 credits. Prerequisite, Econ. 252.
- Econ. 346. Comparative Economic Systems. 5 credits. Prerequisite, Econ. 252.
- Econ. 351. Intermediate Price Theory. 3 credits. Prerequisite, Econ. 252.
- Econ. 354. Economics of the Pacific Northwest. 3 credits.
- Econ. 355. Economics of Labor. 5 credits. Prerequisite, Econ. 252.
- Econ. 356. Government and Business. 4 credits. Prerequisite, Econ. 252.
- Econ. 385. International Economics. 5 credits.
- Econ. 388. Economic History of Europe Since 1760. 5 credits.
- Econ. 444. Economic Education. 3 credits.
- Econ. 445. Current Economics. 3 credits.
- Econ. 446. Introduction to Econometrics. 3 credits. Prerequisite, Bus. Admr. 346.
- Econ. 447. Advanced Econometrics. 3 credits. Prerequisite, Bus. Admr. 446; or Business Statistics and a course in calculus (Math. 175); or Math. 175 and 311 and a course in economics.
- Econ. 450. History of American Labor Relations. 3 credits.
- Econ. 453. History of Economic Thought. 3 credits. Prerequisite, Econ. 252 and Senior Standing.
- Econ. 470. Money and Banking. 5 credits.
- Econ. 480. Public Finance. 5 credits. Prerequisite, Econ. 252.
- Econ. 481. State and Local Government Finance. 5 credits. Prerequisite, Econ. 480.
- Econ. 484. Economic Development. 4 credits. Prerequisites, Econ. 252 and senior standing.
- Econ. 485. Managerial Economics. 3 credits. Prerequisites, Econ. 252, Bus. Admr. 251, Bus. Admr. 246 and senior standing.
- Econ. 488. National Income Analysis. 4 credits. Prerequisite, Econ. 252 and junior standing.
- Econ. 490. Monetary Theory and Policy. 4 credits. Prerequisite, Economics 470 and/or Economics 488.

- Econ. 495. Research Seminar in Economics. 2 credits.  
 Econ. 496, 497. Individual Study. 2 or 3 credits each course.

## Education

- Ed. 322. Teaching of Reading. 3 credits.  
 Ed. 323. Teaching of Arithmetic. 3 credits.  
 Ed. 330. Air Age Education. 3 credits.  
 Ed. 358. Introduction to Guidance. 3 credits.  
 Ed. 362. Educational and Psychological Statistics. 4 credits.  
 Ed. 410. Teaching Nursery School and Kindergarten. 3 credits.  
 Ed. 415. Instructional Media: Utilization. 5 credits. Prerequisite, Ed. 314.  
 Ed. 416. Programed Learning. 3 credits.  
 Ed. 417. Radio and Television in the Classroom. 3 credits.  
 Ed. 419. Reading Readiness. 2 credits.  
 Ed. 420. Teaching the Language Arts. 4 credits.  
 Ed. 421. Modern Reading Program, Primary. 3 credits.  
 Ed. 422. Modern Reading Program, Intermediate. 3 credits.  
 Ed. 423. Reading Problems in the Secondary School. 3 credits.  
 Ed. 424. Reading in Content Fields. 3 credits.  
 Ed. 425. Psychology of Reading. 3 credits. Prerequisite, senior standing. (Also listed as Psy. 425.)  
 Ed. 426. Studies and Problems in Reading. 3 credits.  
 Ed. 427. Modern Arithmetic Program. (Primary) 3 credits.  
 Ed. 428. Modern Arithmetic Program. (Intermediate and Upper Grades) 3 credits.  
 Ed. 431. Intercultural Education. 3 credits.  
 Ed. 433. Family Life Education. 3 credits. Prerequisite, Psy. 295 or equivalent and Ed. 314 or take Ed. 314 concurrently.  
 Ed. 438. Individualizing Instruction. 2 credits.  
 Ed. 440. Workshop. 1 to 6 credits.  
 Ed. 441. Studies in Education. 1-6 credits. Prerequisite, teaching experience.  
 Ed. 446. Directed Observation. 3 credits. Prerequisite, teaching experience or junior standing.  
 Ed. 447. Classroom Teaching Problems. 3 credits. Prerequisite, teaching experience.  
 Ed. 449. Audiovisual Electronics. 3 credits. Prerequisite, Ed. 415.  
 Ed. 450. Instructional Media: Production. 3 credits. Prerequisite, Ed. 415.  
 Ed. 451. Core Curriculum. 3 credits.  
 Ed. 452. Junior High School Curriculum. 3 credits.  
 Ed. 459. Teacher-Counseling. 3 credits. Prerequisite, Ed. 358.  
 Ed. 460. Parent-Teacher Conferences. 2 credits.  
 Ed. 462. Construction and Use of Classroom Tests. 2 credits.  
 Ed. 467. Philosophy of Education. 3 credits.  
 Ed. 468. History of Education. 2 credits.  
 Ed. 469. Advanced Psychological and Educational Statistics. 4 credits. Prerequisite, Ed. 362.  
 Ed. 470. Nongraded Elementary School. 2 credits.  
 Ed. 471. Vocational Development Theory. 3 credits. Prerequisite, Ed. 358, and recommended prerequisite of Psy. 444.  
 Ed. 476. School and Community. 3 credits.  
 Ed. 487. Group Processes and Leadership. 3 credits.  
 Ed. 488. Group Dynamics and the Individual. 3 credits. Prerequisite, Ed. 487.  
 Ed. 492. Contemporary Movements. 3 credits.  
 Ed. 496. Individual Study. 1 to 3 credits.  
 Ed. 499. Seminar in Education. 3 credits.  
 Ed. 507. Introduction to Graduate Study. 3 credits.  
 Ed. 508. Comparative Education. 3 credits.  
 Ed. 516. Instructional Media: Advanced Theory and Practice. 3 credits. Prerequisite, Ed. 415.  
 Ed. 545. Directed Observation in a Core Class. 3 credits. Prerequisite, teaching experience.  
 Ed. 546. Advanced Laboratory Experience. 2-5 credits.  
 Ed. 547. Supervision of Student Teachers. 3 credits. Prerequisite, one year of teaching experience.  
 Ed. 550. Production of Photographic Instructional Materials. 4 credits. Prerequisite, Ed. 415, a high school or college course in basic photography, and recommended prerequisite, Ed. 450.  
 Ed. 551. Elementary School Curriculum. 3 credits.  
 Ed. 552. Senior High School Curriculum. 3 credits.  
 Ed. 555. Program in Curriculum Improvement. 3 credits.  
 Ed. 558. Administration of the Pupil Personnel Program. 3 credits. Prerequisite, Ed. 358 or consent.

- Ed. 559, E, I, or SC. **Practicum in Counseling.** 4-12 credits. Prerequisite, departmental approval.
- Ed. 562. **Evaluation of the School Program.** 3 credits.
- Ed. 570. **Educational Foundations.** 3 credits.
- Ed. 574. **Adult Education.** 3 credits.
- Ed. 576. **Personnel Relations in Schools.** 3 credits.
- Ed. 577. **In-Service Program.** 3 credits.
- Ed. 578. **Instructional Media: Administration.** 3 credits. Prerequisite, Ed. 415.
- Ed. 579. **Elementary School Principal.** 5 credits. Prerequisite, one year of teaching experience.
- Ed. 580. **Junior High School Principal.** 5 credits. Prerequisite, one year of teaching experience.
- Ed. 581. **High School Principal.** 5 credits. Prerequisite, one year of teaching experience.
- Ed. 582. **Internship in School Administration.** 5 credits.
- Ed. 583. **Field Project in School Administration.** 1-15 credits.
- Ed. 585. **School Supervision.** 5 credits. Prerequisite, one year of teaching experience.
- Ed. 587. **Education Administration.** 5 credits. Prerequisite, one year of teaching experience.
- Ed. 588. **Federal, State and County Education.** 3 credits.
- Ed. 589. **School Plant Planning.** 3 credits.
- Ed. 590. **Public School Finance.** 5 credits.
- Ed. 595. **The Community Junior College.** 3 credits.
- Ed. 596. **Individual Study.** 1-6 credits.
- Ed. 599A. **Seminar in Educational Administration.** 3 credits.
- Ed. 599C. **Seminar in Curriculum.** 2 credits.
- Ed. 599CC. **Seminar in Core Curriculum.** 2 credits.
- Ed. 600. **Thesis.** 1-6 credits.

## English

- Eng. 320. **Children's Literature.** 3 credits.
- Eng. 339. **The English Language.** 3 credits. Prerequisite, Eng. 240.
- Eng. 342. **Creative Writing.** 3 credits.
- Eng. 344. **Advanced Composition.** 3 credits.
- Eng. 347, 348, 349. **The English Novel.** 3 credits each quarter.
- Eng. 351, 352, 353. **Shakespeare.** 3 credits each quarter.
- Eng. 361, 362, 363. **Drama of the English Renaissance.** 3 credits each quarter.

- Eng. 370, 371, 372. **American Fiction.** 3 credits each quarter.
- Eng. 377. **American Poetry I.** 3 credits.
- Eng. 384. **The Short Story.** 3 credits.
- Eng. 428. **Teaching Composition and Literature in the Secondary Schools.** 4 credits. Prerequisite, 24 credits in English including 3 credits in linguistic requirements but excluding the required composition sequence. Exceptions will be made only for students enrolled in Junior High School Broad Area, Social Science, and Language Arts Majors.
- Eng. 440. **Workshop.** 1 to 6 credits.
- Eng. 442. **The History of the English Language.** 3 credits.
- Eng. 443. **Rhetorical Theory and Practice.** 3 credits.
- Eng. 445. **Approaches to English Grammar.** 3 credits.
- Eng. 447. **The Age of Chaucer.** 3 credits.
- Eng. 448. **Chaucer.** 3 credits.
- Eng. 453. **Milton.** 3 credits.
- Eng. 459. **Modern British Poetry.** 3 credits.
- Eng. 460, 461, 462. **The English Renaissance.** 3 credits each quarter.
- Eng. 463, 464, 465. **The Restoration and Eighteenth Century.** 3 credits each quarter.
- Eng. 466, 467, 468, 469. **The Nineteenth Century.** 3 credits each quarter.
- Eng. 474. **Colonial American Literature.** 3 credits.
- Eng. 475. **American Literature of the Revolutionary Period.** 3 credits.
- Eng. 476. **The Romantic Movement in American Literature.** 3 credits.
- Eng. 477. **American Poetry II.** 3 credits.
- Eng. 479. **Restoration and Eighteenth Century Drama.** 3 credits.
- Eng. 480. **Twentieth Century Literature.** 3 credits.
- Eng. 485. **The Continental Novel.** 3 credits.
- Eng. 491. **Literary Criticism.** 3 credits.
- Eng. 492. **Modern Literary Criticism.** 3 credits.
- Eng. 496, 497, 498. **Individual Study.** 1 to 3 credits each course.
- Eng. 499. **English Seminar.** 3 credits.
- Eng. 501. **Research in English.** 4 credits.
- Eng. 541. 1.2.3.4.5.6.7.8.9. **Studies in the English Language.** 4 credits each.
- Eng. 545. 1.2.3.4.5.6.7.8.9. **Pro-seminar in English Literature.** 4 credits each.
- Eng. 575. 1.2.3.4.5.6.7.8.9. **Pro-seminar in American Literature.** 4 credits each.
- Eng. 591. 1.2.3. **Literary Criticism.** 4 credits.

- Eng. 596. 1.2.3. Individual Study. 1 to 4 credits each.  
 Eng. 599. 1.2.3. English Graduate Seminar. 4 credits each.  
 Eng. 600. Thesis 1-6 credits.

## Foreign Languages

- Foreign Language Education 328. Methods and Materials for the Teaching of Modern Foreign Languages. 3 credits. Prerequisite, French 253, or Spanish 253 or German 253.  
 Foreign Language Education 420. Special Problems in the Teaching of Modern Foreign Languages. 3 credits.

## French

- Fr. 351, 352, 353. Survey of French Literature. 3 credits each quarter. Prerequisite, Fr. 253 or equivalent.  
 Fr. 361, 362, 363. Intermediate Conversation and Composition. 2 credits each quarter. Courses must be taken in sequence. Prerequisite, French 263 or equivalent. Scheduled so that they may be taken concurrently with Fr. 351, 352, 353, respectively.  
 Fr. 371. 17th Century French Literature. 5 credits. Prerequisite, French 352 or equivalent.  
 Fr. 375. 18th Century French Literature. 5 credits. Prerequisite, Fr. 352 or equivalent.  
 Fr. 426. Medieval French Literature. 5 credits. Prerequisite, Fr. 351.  
 Fr. 427. French Renaissance Literature. 4 credits. Prerequisite, Fr. 351 or equivalent.  
 Fr. 430. French Romanticism. 3 credits. Prerequisite, Fr. 353 or equivalent.  
 Fr. 435. French Realism and Naturalism. 5 credits. Prerequisite, Fr. 353 or equivalent.  
 Fr. 441. French Grammar for Teachers. 3 credits. Prerequisite, 2 years of college French or equivalent.  
 Fr. 450. Contemporary French Novel. 5 credits. Prerequisite, Fr. 353 or equivalent.  
 Fr. 452. Contemporary Theater. 5 credits. Prerequisite, Fr. 353 or equivalent.  
 Fr. 455. French Poetry of the 19th and 20th Centuries. 3 credits. Prerequisite, 353 or equivalent.  
 Fr. 461, 462, 463. Advanced Conversation and Composition. 2 credits each quarter. Prerequisite for French 461, 363 or equivalent.  
 Fr. 480. The "Avant-garde" Literature of France. 4 credits. Prerequisite, French 353 or equivalent.

- Fr. 482. Oral Readings. 3 credits.  
 Fr. 485. Moralists and Essayists from the Renaissance to the Present. 4 credits. Prerequisite, French 351, 352, 353, or permission of the instructor.  
 Fr. 496, 497, 498. Individual Study. 2 credits each course. Prerequisite, Fr. 351, 352, 353 or equivalent and permission of the instructor and of the department chairman.

## Geography

- Geog. 337. Middle America. 3 credits.  
 Geog. 345. Industrial Geography. 3 credits. Prerequisite, Geog. 245 or consent of instructor.  
 Geog. 346. Political Geography. 3 credits.  
 Geog. 350. Conservation of Natural Resources. 3 credits.  
 Geog. 352. Geography of Anglo-America. 5 credits.  
 Geog. 365. Geography of Africa. 5 credits.  
 Geog. 371. Geography of Europe. 5 credits.  
 Geog. 380. Geography of Hot, Wet Lands. 3 credits.  
 Geog. 384. Introductory Cartography. 5 credits.  
 Geog. 386. Geomorphology. 3 credits. Prerequisites, introductory physical geography or geology or permission of instructor.  
 Geog. 388. Climatology. 3 credits. Prerequisite, Geog. 107 or instructor's permission.  
 Geog. 405. Advanced Cartography. 5 credits. Prerequisite, Geography 384 or consent of instructor.  
 Geog. 408. Advanced Cultural Geography. 3 credits. Prerequisite, Geography 108 or consent of instructor.  
 Geog. 410. Interpretation of Aerial Photographs. 3 credits. Prerequisite, Geography 384, or consent of instructor.  
 Geog. 415. Geography of Oceania. 3 credits.  
 Geog. 421. Practical Aids in Teaching Geography. 2 credits. Prerequisite, ten credits in geography.  
 Geog. 425. Field Methods in Geography. 5 credits. (Geog. 384 recommended.)  
 Geog. 445. Natural Resources Policy. 4 credits.  
 Geog. 446. Land Use in U.S. 3 credits. Prerequisite, Geog. 107 or consent of instructor.  
 Geog. 470. Geography of South America. 3 credits.  
 Geog. 472. Geography of the Soviet Union. 3 credits.  
 Geog. 474. Geography of China. 2 credits.  
 Geog. 475. Geography of Asia. 5 credits.

- Geog. 480. Geography of the Polar Regions. 3 credits.
- Geog. 481. Urban Geography. 5 credits. Prerequisite, Geog. 245 or consent of instructor.
- Geog. 484. Geography of Southeast Asia. 2 credits.
- Geog. 490. History of Geographic Thought. 3 credits.
- Geog. 491. Geographic Methodology. 3 credits. Prerequisite, 15 hours of geography or consent of instructor.
- Geog. 494. Seminar—Problems in Resource Allocation. 3 credits. Prerequisite, permission of the instructor.
- Geog. 495. Research Seminar in Geography. 2 credits.
- Geog. 496. Individual Study. 2 credits.
- Geog. 546. Water Resources Seminar. 3 credits.
- Geog. 595. Seminar—Research in Geography. 3 credits.

## Geology

- Geol. 345. Principles of Geology. Offered only during summer quarters. Not open to majors and minors in geology.
- Geol. 350. Washington Geology. 3 credits. Geol. 355.
- Geol. 355. Field Geology. 4 credits. Prerequisite, permission of the instructor.
- Geol. 360. Structural Geology. 4 credits. Prerequisite, Geol. 145 and 146.
- Geol. 450. Stratigraphy. 4 credits.
- Geol. 460. Sedimentation. 4 credits. Prerequisites, Geol. 245 and 247.
- Geol. 465. Mineral Deposits. 4 credits. Prerequisites, Geol. 245 and 247.
- Geol. 470. Optical Mineralogy. 5 credits. Prerequisite, Geol. 247.
- Geol. 475. Petrography. 5 credits. Prerequisite, Geol. 470.
- Geol. 496, 497. Individual Study. 2 to 4 credits each course.

## German

- Germ. 351, 352. Introduction to the Classical Period. 3 credits per quarter. Prerequisite, Germ. 253 or equivalent.
- Germ. 353. Introduction to the German Novelle. 3 credits. Prerequisite, Germ. 253 or equivalent.
- Germ. 357. Goethe: *Faust*. Part I. 3 credits. Prerequisite, Germ. 253 or equivalent.

- Germ. 361, 362, 363. Intermediate Conversation and Composition. 2 credits each quarter. Courses must be taken in sequence. Prerequisite for 361, Germ. 263 or equivalent. Scheduled so that they may be taken concurrently with Germ. 351, 352, 353 respectively.
- Germ. 430. German Romanticism. 3 credits. Prerequisite, Germ. 353 or permission.
- Germ. 432. German Lyric Poetry. 3 credits. Prerequisite, Germ. 353 or permission.
- Germ. 441. German Grammar for Teachers. 3 credits. Prerequisite, 2 years of college German or equivalent.
- Germ. 448. Goethe: *Faust*. Part II. 3 credits. Prerequisite, Germ. 357 or permission.
- Germ. 451. The German Novel of the 19th Century. 3 credits. Prerequisite, Germ. 353 or permission.
- Germ. 452. The German Novel of the 20th Century. 3 credits. Prerequisite, Germ. 353 or permission.
- Germ. 456. German Drama of the 19th Century. 3 credits. Prerequisite, Germ. 353 or permission.
- Germ. 457. Contemporary German Drama. 3 credits. Prerequisite, Germ. 353 or permission.
- Germ. 461, 462, 463. Advanced Conversation and Composition. 2 credits. Prerequisites for Germ. 461, 363 or equivalent.
- Germ. 469. History of the German Language. 5 credits. Prerequisite, Germ. 253 or permission.
- Germ. 496, 497, 498. Individual Study. 2 credits each course. Prerequisite, Germ. 351, 352, 353 or equivalent and permission of the instructor and of the department chairman.

## Health Education

- H.Ed. 321. Methods and Materials in Health Education. 3 credits. Prerequisite, H.Ed. 100, H.Ed. 207.
- H.Ed. 345. Advanced First Aid. 2 credits. Prerequisite, H.Ed. 245.
- H.Ed. 347. Home Care for the Sick. 2 credits. Prerequisite, junior standing.
- H.Ed. 349. Anatomy and Kinesiology. 5 credits. Prerequisite, Zool. 270.
- H.Ed. 450. Physiology of Exercise. 3 credits. Prerequisite, H.Ed. 349.
- H.Ed. 470. School and Community Health. 3 credits.
- H. Ed. 499. Seminar in Health Education and Safety Education. 2 credits.
- H.Ed. 518. Health Education in Elementary Schools. 3 credits.



- H.Ed. 525. Health Education in Secondary Schools. 3 credits.  
 H.Ed. 560. Applied Physiology for Teachers. 3 credits.  
 H.Ed. 580. Administration and Supervision of Health and Safety Education. 3 credits. Prerequisite, H.Ed. 321 and P.E. 460.  
 H.Ed. 596. Individual Study. 1-6 credits.

## History

- Hist. 302. The Ancient Near East and Greece. 5 credits.  
 Hist. 303. The History of Rome. 500 B.C.-500 A.D. 5 credits.  
 Hist. 310. Introduction to History of Science. 5 credits.  
 Hist. 315. The Moslem World. 5 credits.  
 Hist. 331. Colonial Africa. 5 credits.  
 Hist. 332. Independent Africa. 5 credits.  
 Hist. 335. The Rise of India. 5 credits.  
 Hist. 340.1. Colonial America: 17th Century. 5 credits.  
 Hist. 340.2. Colonial America: 18th Century. 5 credits.  
 Hist. 340.3. The American Revolution. 5 credits.  
 Hist. 341. The United States: Early National Period, 1789-1844. 5 credits.  
 Hist. 348. Economic History of the United States. 5 credits.  
 Hist. 349. Selected American Biographies. 5 credits.  
 Hist. 365. The British Empire and Commonwealth. 5 credits.  
 Hist. 369. History of Canada. 5 credits.  
 Hist. 371. Medieval History: 500-1300. 5 credits.  
 Hist. 373. English Constitutional History. 5 credits.  
 Hist. 385. Modern Asia. 5 credits.  
 Hist. 388. Economic History of Europe since 1760. 5 credits.  
 Hist. 389. Modern European Labor Movements. 5 credits.  
 Hist. 390. The Latin American Colonies. 5 credits.  
 Hist. 391. The South American Republics. 5 credits.  
 Hist. 421. Methods and Materials in History—Secondary. 2 credits.  
 Hist. 425. Renaissance and Reformation. 5 credits.  
 Hist. 430.1. Tudor-Stuart England. 5 credits.  
 Hist. 430.2. Britain in the Eighteenth and Nineteenth Centuries. 5 credits.  
 Hist. 430.3. Britain in the Twentieth Century. 5 credits.  
 Hist. 442. Urban and Industrial America: 1877-1900. 5 credits.  
 Hist. 443. The West in American History. 5 credits.  
 Hist. 444. The Civil War and Reconstruction. 5 credits.  
 Hist. 445. The American Colonial Mind. 3 credits.  
 Hist. 450.1. 20th Century U.S.: 1898-1933. 5 credits.  
 Hist. 450.2. 20th Century U.S.: 1933 to the Present. 5 credits.  
 Hist. 455. Intellectual History of the United States. 5 credits.  
 Hist. 457. Europe under the Old Regime, 1648-1789. 5 credits.  
 Hist. 458. The French Revolution and Napoleon. 5 credits.  
 Hist. 463. American Diplomatic History: Pre-1900. 5 credits. Prerequisite, 10 hours of American history or consent of the instructor.  
 Hist. 464. American Diplomatic History: Post-1900. 5 credits. Prerequisite, 10 hours of American history or consent of the instructor.  
 Hist. 465.1. The Habsburg Empire, 1806-1867. 4 credits.  
 Hist. 465.2. The Dual Monarchy, 1867-1918. 4 credits.  
 Hist. 467. Diplomatic History of Europe: 1815-1914. 5 credits.  
 Hist. 473. Russia to the Twentieth Century: 862-1905. 5 credits.  
 Hist. 474. Twentieth Century Russia. 5 credits.  
 Hist. 475. History of Modern France. 5 credits.  
 Hist. 477. Modern Germany. 5 credits.  
 Hist. 479. Europe in the Twentieth Century. 5 credits.  
 Hist. 480. The World Since 1945. 3 credits.  
 Hist. 481. Understanding History. 5 credits.  
 Hist. 485. European Intellectual and Cultural History: 1500-1815. 5 credits.  
 Hist. 486. European Intellectual and Cultural History Since 1815. 5 credits.  
 Hist. 490. Mexico and the Caribbean in the 20th Century. 5 credits.  
 Hist. 496, 497. Individual Study. 2 credits, each course.  
 Hist. 501. Historiography. 5 credits.  
 Hist. 505. Research Seminar in History. 5 credits.

## Home Economics

- H. Ec. 320. **Methods in Home Economics Education.** 3 credits. Prerequisites, Ed. 314, which may be taken concurrently; and 40 credits in Home Economics (30 credits and permission for those enrolled in 45 credit major.)
- H. Ec. 330. **Nutrition Activities in the Elementary School.** 1 credit. Prerequisite, H. Ec. 200.
- H. Ec. 349. **Family Clothing.** 2 credits.
- H. Ec. 365. **Home Furnishings.** 4 credits. Prerequisite, Art. 170 or H. Ec. 156; H. Ec. 150 or permission of instructor.
- H. Ec. 376. **Household Equipment.** 3 credits.
- H. Ec. 377. **Family Housing.** 3 credits.
- H. Ec. 381. **Family Finance.** 3 credits. Prerequisite, recommended Econ. 242.
- H. Ec. 385. **Family Meal Planning and Service.** 3 credits. Prerequisite, H. Ec. 185, 200.
- H. Ec. 386. **Food Selection for the Family.** 3 credits. Prerequisite, H. Ec. 185.
- H. Ec. 391. **Consumer Buying of Household Goods.** 3 credits. Prerequisite, H. Ec. 155, 185, or permission of instructor.
- H. Ec. 394. **Modern Problems of the Family.** 3 credits. Prerequisite, H. Ec. 294.
- H. Ec. 415. **Principles of Draping.** 4 credits. Prerequisite, H. Ec. 150, 155, 156 and 250 or equivalent.
- H. Ec. 421. **Methods in Adult Education in Home Economics.** 2 credits. Prerequisite, H. Ec. 320.
- H. Ec. 422. **Evaluation in Home Economics Education.** 3 credits. Prerequisite, H. Ec. 320, and teaching experience or permission of department chairman.
- H. Ec. 430. **Homemaking for the Handicapped.** 3 credits. Prerequisite, H. Ec. 200, 270, 376, or permission of instructor.
- H. Ec. 433. **Family Life Education.** 3 credits. Prerequisite, H. Ec. 294 and Ed. 314 or take Ed. 314 concurrently.
- H. Ec. 440. **Workshop.** 1-6 credits. Prerequisite, senior standing and 3-5 credits in the area for which the workshop is planned or permission.
- H. Ec. 445. **Problems in Human Nutrition.** 2 credits. Prerequisite, H. Ec. 200
- H. Ec. 447. **Nutrition and Society.** 3 credits. Prerequisite, H. Ec. 200.
- H. Ec. 450. **Tailoring.** 3 credits. Prerequisites, H. Ec. 150 and 250.
- H. Ec. 455. **New Developments in Textiles.** 3 credits.
- H. Ec. 460. **Advanced Weaving.** 3 credits. Prerequisite, H. Ec. 260 or permission.
- H. Ec. 470. **Home Management Laboratory.** 5 credits. Prerequisite, H. Ec. 200, 270, 376, 385 and 3rd quarter junior standing.
- H. Ec. 485. **Experimental Foods I.** 2 credits. Prerequisite, H. Ec. 185 and at least 5 hours of chemistry.
- H. Ec. 487. **Experimental Foods II.** 2 credits. Prerequisites, H. Ec. 485.
- H. Ec. 490. **Nursery School.** 3 credits. Prerequisite, H. Ec. 200, 294, and 290 or Psychology 309.
- H. Ec. 491. **Laboratory Experience with Infants.** 3 credits. Prerequisite, H. Ec. 200, Psych. 100, H. Ec. 290 or Psych. 309.
- H. Ec. 492. **Child Care and Family Dynamics.** 3 credits. Prerequisite, H. Ec. 290 or Psych. 309.
- H. Ec. 496, 497, 498. **Individual Study.** 1-6 credits.
- H. Ec. 499. **Seminar in Home Economics Education.** 1 credit.
- H. Ec. 520. **Supervision in Vocational Home Economics Education.** 2 credits.
- H. Ec. 521. **Problems in Curriculum Development in Home Economics Education.** 2 credits.
- H. Ec. 522. **Survey of Literature in Home Economics Education.** 2 credits.
- H. Ec. 530. **Demonstration Techniques.** 3 credits. Prerequisites, H. Ec. 155, 270, 376, 385.
- H. Ec. 536. **Advanced Home Furnishing.** 5 credits. Prerequisites, H. Ec. 156, 365, 377.
- H. Ec. 550. **Recent Developments in Clothing Construction Techniques and Methods of Teaching.** 2 credits.
- H. Ec. 515. **Social Implications of Clothing.** 2 credits.
- H. Ec. 555. **Original Design.** 5 credits. Prerequisites, H. Ec. 150, 155, 156, 250, and Art 170, completion of undergraduate major in Home Economics, or permission of instructor.
- H. Ec. 575. **History of Housing and Furnishing.** 3 credits. Prerequisite, H. Ec. 275, 365, 377.
- H. Ec. 581. **Advanced Family Finance.** 2 credits. Prerequisites, H. Ec. 270, 381.
- H. Ec. 587. **Gourmet Cooking.** 3 credits. Prerequisites, H. Ec. 185, 200, 385, 386.
- H. Ec. 590. **Research in Family Relations.** 3 credits. Prerequisite, H. Ec. 295 and 394.
- H. Ec. 595. **Problems of the Aging.** 2 credits. Prerequisite, H. Ec. 294, 394.
- H. Ec. 596, 597, 598. **Individual Study.** 1-6 credits.
- H. Ec. 599. **Seminar in Home Economics Education.** 1-3 credits. Prerequisite, completed broad area major in Home Economics and teaching experience.

## Journalism

- Journ. 360. Feature Writing and Editorial Writing. 2 credits.  
 Journ. 364. News Photography. 2 credits.  
 Journ. 365. High School Publications. 3 credits.  
 Journ. 369. The Press and Society. 3 credits.

## Library Science

- Lib. 418. Reference in Subject Areas. 4 credits. Prerequisite, Lib. 318.  
 Lib. 420. Reading Materials for Adolescents. 3 credits.  
 Lib. 440. Workshop—or—Clinic. 1 to 6 credits.  
 Lib. 445. Understanding and Application of Library Resources. 3 credits.  
 Lib. 460. Advanced Cataloging and Classification. 3 credits. Prerequisite, Lib. 360.  
 Lib. 470. School Library Administration. 3 credits.  
 Lib. 485. Research and Bibliography. 2 credits.  
 Lib. 490. Historical Survey of Books and Libraries. 3 credits.

## Mathematics

- Math. 311. Statistical Techniques. 3 credits. Prerequisite, Math. 163 or permission.  
 Math. 324. Methods and Materials in Mathematics—Secondary. 3 credits.  
 Math. 356. Introduction to Topology. 3 credits. Prerequisite, Math. 261.2.  
 Math. 376.1, 376.2, 376.3. Applied Differential Equations. 3 credits each course. Prerequisites, Math. 271.3 or permission.  
 Math. 380. Principles of Digital Computers and Programing. 3 credits. Prerequisite, Math. 150, 271.2.  
 Math. 411.1, 411.2, 411.3. Theory of Statistics. 3 credits each course. Prerequisite, 271.3 or permission.  
 Math. 422.1, 422.2. Modern Programs in Mathematics. 3 credits each course. Prerequisite, junior standing or permission.  
 Math. 430. Introduction to Theory of Numbers. 3 credits. Prerequisite, two years of college mathematics or permission.  
 Math. 455.1, 455.2, 455.3. Principles of Geometry. 3 credits each course. Prerequisites, Math. 261.2 or permission.  
 Math. 461.1, 461.2, 461.3. Abstract Algebra. 3 credits each course. Prerequisites, Math. 261.2.

- Math. 468.1. Logic. 3 credits. Prerequisites, Math. 261.1 or Phil. 360 or permission.  
 Math. 468.2. Formalized Theories. 3 credits. Prerequisite, Math. 261.1, 261.2, 468.1 or Phil. 360, Math. 261.2, Phil. 468.1 or permission.  
 Math. 468.3. Computability. 3 credits. Prerequisites, Math. 261.1, 261.2 or Phil. 360, Math. 261.2 or permission.  
 Math. 471.1, 471.2, 471.3. Advanced Analysis. 3 credits, each course. Prerequisites, Math. 261.2, (or taken concurrently) 271.3 for 471.2, 471.1 for 471.2, 471.2 for 471.3.  
 Math. 481.1, 481.2, 481.3. Numerical Analysis. 3 credits each course. Prerequisites, Math. 271.3; Math. 380 for Math. 481.1; Math. 376.2 for Math. 481.3.  
 Math. 495.1, 495.2, 495.3. Problem Seminar. 1 to 3 credits each course. Prerequisite, permission.  
 Math. 496, 497. Individual Study. 2-4 credits each course.  
 Math. 498.1, 498.2, 498.3. Seminar. 1 to 3 credits each course. Prerequisite, permission.  
 Math. 551.1, 551.2, 551.3. Topology. 3 credits, each course. Prerequisite, Math. 461.3 and 471.3 or equivalent. Permission.  
 Math. 561.1, 561.2, 561.3. Modern Algebra. 3 credits each course. Prerequisites, Math. 461.3, or equivalent and permission.  
 Math. 571.1, 571.2, 571.3. Theory of Analytic Functions. 3 credits each course. Prerequisite, Math. 471.3 or equivalent and permission.  
 Math. 576.1, 576.2, 576.3. Theory of Real Variables. 3 credits each course. Prerequisite, Math. 471.3 or equivalent and permission.  
 Math. 598.1, 598.2, 598.3. Graduate Seminar. 1-3 credits each course. Prerequisite, permission.  
 Math. 599.1, 599.2, 599.3. Problem Seminar. 1-3 credits each course. Permission.  
 Math. 600. Thesis. 1-6 credits. Prerequisite, graduate standing.

## Music

- Mus. 321. Music Education for the Elementary School. 3 credits. Prerequisite, Music 146 and suitable skill in piano and voice.  
 Mus. 323. Choral Music Education. 3 credits. Prerequisite, Mus. 321 and suitable conducting and performance skill in piano and voice.  
 Mus. 324. Elementary Piano for the Classroom Teacher. 1 credit.

- Mus. 325. Instrumental Music Education. 3 credits. Prerequisite, Mus. 321 and suitable conducting and performance skill in piano or instrument.
- Mus. 326. Music in the Classroom. 3 credits.
- Mus. 327. Song Literature for Elementary Grades. 2 credits.
- Mus. 340. Form Analysis. 3 credits. Prerequisite, Mus. 246.
- Mus. 341. Conducting I. 3 credits. Prerequisite, Mus. 146. Open to music majors and minors only.
- Mus. 342. Conducting II. 3 credits. Prerequisite, Mus. 341.
- Mus. 343. Counterpoint I. 3 credits. Prerequisite, Mus. 246.
- Mus. 347, 348, 349. Chamber Groups. 1 credit each.
- Mus. 350. Ear Training and Sight-Singing. 2 credits. Prerequisite, Mus. 146.
- Mus. 354, 355, 356. Vocal and Instrumental Class Instruction. 1 credit each.
- Mus. 364, 365, 366. Applied Music. 1 credit each.
- Mus. 367, 368, 369. Choir. 1 credit each.
- Mus. 367M, 368M, 369M. Men's Glee Club. 1 credit each.
- Mus. 367W, 368W, 369W. Women's Glee Club. 1 credit each.
- Mus. 377, 378, 379. Orchestra. 1 credit each.
- Mus. 387, 388, 389. Band. 1 credit each.
- Mus. 418, 419, 420. Piano Pedagogy. 1 credit each.
- Mus. 421. Observation of Music Teaching. 1 credit.
- Mus. 423. Rhythms for the Elementary School. 3 credits. Prerequisite, Mus. 321.
- Mus. 424. General Music in the Junior High School. 2 credits. Prerequisite, Mus. 323, or permission.
- Mus. 425, 426, 427. Methods of Teaching Individual Lessons. 1 credit each. Prerequisite, permission.
- Mus. 430. Diction in Singing Foreign Languages. 3 credits. Prerequisite, permission.
- Mus. 440. Workshop—; or—Clinic. 1 to 6 credits.
- Mus. 441. Keyboard Harmony and Improvisation. 3 credits.
- Mus. 443. Counterpoint II. 3 credits. Prerequisite, Mus. 343.
- Mus. 444. Canon and Fugue. 3 credits. Prerequisite, Mus. 443.
- Mus. 446. The Madrigal Choir. 3 credits.
- Mus. 447, 448, 449. Chamber Groups. 1 credit each.
- Mus. 450. Literature of Bach. 3 credits. Prerequisites, Mus. 270, 272, 274, 340, and 343.
- Mus. 452. Literature of Beethoven. 3 credits. Prerequisites, Mus. 270, 272, 274, 340, and 343.
- Mus. 458. Survey of Solo Vocal Literature. 3 credits. Prerequisite, permission.
- Mus. 464, 465, 466. Applied Music. 1 credit each.
- Mus. 467, 468, 469. Choir. 1 credit each.
- Mus. 467M, 468M, 469M. Men's Glee Club. 1 credit each.
- Mus. 467W, 468W, 469W. Women's Glee Club. 1 credit each.
- Mus. 471. History of Orchestral Music. 3 credits. Prerequisite, Mus. 270, 272, and 274.
- Mus. 472. Orchestration I. 3 credits. Prerequisite, Mus. 340 and 343.
- Mus. 474. Modern Literature Analysis. 3 credits. Prerequisites, Mus. 270, 272, 274, 340 and 343.
- Mus. 475. History of Chamber Music. 3 credits. Prerequisites, Mus. 270, 272, and 274.
- Mus. 476. History of Choral Music. 3 credits. Prerequisites, Mus. 270, 272, and 274.
- Mus. 477, 478, 479. Orchestra. 1 credit each course.
- Mus. 480. Reed Making for Double Reed Instruments. 1 credit.
- Mus. 481. Instrument Repair. 1 credit.
- Mus. 482. Instrumental Administration Techniques. 3 credits.
- Mus. 483. Composition I. 3 credits. Prerequisites, Mus. 340 and 343.
- Mus. 484. Band Arranging I. 3 credits. Prerequisites, Mus. 340 and 343.
- Mus. 485. The Marching Band. 3 credits.
- Mus. 486. Stage Band Arranging. 3 credits. Prerequisite, Mus. 343.
- Mus. 487, 488, 489. Band. 1 credit each course.
- Mus. 490. Harmonic Analysis. 3 credits. Prerequisites, Mus. 340, 343.
- Mus. 491. Choral Interpretation and Techniques. 3 credits.
- Mus. 492. Choral Composition and Arranging I. 3 credits. Prerequisite, Mus. 340, 343.
- Mus. 494. Elements of Music. 3 credits. Prerequisite, Mus. 246.
- Mus. 495. Senior Project. 2 credits.
- Mus. 496, 497, 498. Individual Study. 2 credits each course.
- Mus. 499. Seminar in Music Education. 1 to 4 credits.
- Mus. 520. Methods of Teaching Theory. 3 credits. Prerequisite, permission.

- Mus. 521. **Methods of Musical Research.** 3 credits.
- Mus. 525. **Administration of College Music Departments.** 3 credits.
- Mus. 530. **Early Keyboard Music Through 1750.** 3 credits. Prerequisite, permission.
- Mus. 533. **Chamber Music Performance.** 3 credits.
- Mus. 535. **Techniques of Musical Analysis.** 3 credits.
- Mus. 541. **Conducting III—Choral.** 3 credits. Prerequisite, Mus. 342 and 491.
- Mus. 545. **Modern Counterpoint.** 3 credits. Prerequisite, Mus. 246, 443.
- Mus. 546. **Advanced Madrigal Choir.** 3 credits. Prerequisite, Mus. 446.
- Mus. 547, 548, 549. **Chamber Groups.** 1 credit each course. Prerequisite, permission.
- Mus. 551. **Accompaniment and Song.** 2 credits. Prerequisite, permission.
- Mus. 554D. **Advanced Technique Class—Woodwind.** 1 credit.
- Mus. 554E. **Advanced Technique Class—Brass.** 1 credit. Prerequisite, one section of Mus. 154E or equivalent.
- Mus. 560. **Psychology and Guidance in Music Education.** 3 credits.
- Mus. 561. **Opera Workshop.** 2 credits. Prerequisite, permission.
- Mus. 562. **Trends in Music Education.** 3 credits.
- Mus. 564, 565, 566. **Applied Music.** 1 credit each course.
- Mus. 567, 568, 569. **Choir.** 1 credit each course.
- Mus. 567M, 568M, 569M. **Men's Glee Club.** 1 credit each.
- Mus. 567W, 568W, 569W. **Women's Glee Club.** 1 credit each course.
- Mus. 570. **History of Vocal Art.** 3 credits. Prerequisite, permission.
- Mus. 573. **History of Opera.** 3 credits. Prerequisites, Mus. 270, 272, and 274.
- Mus. 577, 578, 579. **Orchestra.** 1 credit each course.
- Mus. 580. **Orchestration II.** 3 credits. Prerequisite, Orchestration I.
- Mus. 583. **Composition II.** 3 credits. Prerequisite, Composition I.
- Mus. 584. **Composition III.** 3 credits. Prerequisite, Composition II.
- Mus. 585. **Band Arranging II.** 3 credits. Prerequisite, Mus. 484.
- Mus. 587, 588, 589. **Band.** 1 credit each course.
- Mus. 590. **Supervision of Public School Music.** 3 credits.
- Mus. 592. **Advanced Choral Composition and Arranging.** 3 credits. Prerequisite, Mus. 492.

- Mus. 596. **Individual Study.** 1 to 6 credits.
- Mus. 599. **Seminar in the History of Music.** 3 credits.
- Mus. 600. **Thesis.** 1-6 credits.

## Philosophy

- Phil. 301. **Indian Philosophy.** 4 credits. Prerequisite, Phil. 207 or consent of the instructor.
- Phil. 345. **Ethics.** 5 credits.
- Phil. 346. **Aesthetics.** 5 credits.
- Phil. 350. **Philosophy of Religion.** 5 credits.
- Phil. 352. **History of Western Philosophy I.** 4 credits. Prerequisite, Phil. 207.
- Phil. 353. **History of Western Philosophy II.** 4 credits. Prerequisite, Phil. 207.
- Phil. 354. **History of Western Philosophy III.** 4 credits. Prerequisite, Phil. 353.
- Phil. 355. **Contemporary Thought.** 4 credits.
- Phil. 356. **American Philosophy.** 4 credits. Prerequisite, one course in philosophy or permission.
- Phil. 357. **Contemporary Analytic Philosophy.** 4 credits. Prerequisite, Phil. 355 or permission.
- Phil. 358. **Existentialism.** 4 credits. Prerequisite, Phil. 354 or 383 or consent of the instructor.
- Phil. 360. **Introduction to Symbolic Logic.** 3 credits. Prerequisite, Introduction to Logic or consent of the instructor.
- Phil. 361. **Theory of Knowledge.** 4 credits. Prerequisite, at least two courses in philosophy or permission of the instructor.
- Phil. 362. **Continental Rationalism.** 4 credits. Prerequisite, one course in philosophy.
- Phil. 363. **British Empiricism.** 4 credits. Prerequisite, one course in Philosophy.
- Phil. 380. **Plato.** 4 credits. Prerequisite, Phil. 352.
- Phil. 382. **Aristotle.** 4 credits. Prerequisite, Phil. 352.
- Phil. 383. **Kant.** 4 credits. Prerequisite, Phil. 353. In addition, Phil. 352 is recommended, though not required.
- Phil. 450. **Philosophy of History.** 4 credits.
- Phil. 465. **Advanced Ethics.** 4 credits. Prerequisite, Phil. 345 or consent of instructor.
- Phil. 467. **Philosophy of Education.** 3 credits. (Same as Ed. 467.)
- Phil. 468.1. **Logic.** 3 credits. Prerequisites, Math. 261.1 or Phil. 360 or permission. (Same as Math. 468.1)

- Phil. 468.2. **Formalized Theories.** 3 credits. Prerequisites, Math. 261.1, 261.2, 468.1 or Phil. 360, Math. 261.2, Phil. 468.1 or permission. (Same as Math. 468.2)
- Phil. 468.3. **Computability.** 3 credits. Prerequisites, Math. 261.1 or Phil. 360, Math. 261.2 or permission. (Same as Math. 468.3)
- Phil. 480. **Philosophy of Science.** 5 credits. Prerequisites, Phil. 207, senior standing and a science or philosophy minor.
- Phil. 481. **Philosophy of the Social Sciences.** 4 credits. (Same as Soc. 481.)
- Phil. 493. **Undergraduate Thesis.** 2-2 credits. Prerequisite, advanced standing and consent of instructor. To be taken in two consecutive quarters. Credits granted at conclusion of second quarter.
- Phil. 496. **Individual Study.** 3-6 credits. Prerequisite, G.P.A. of 3.0 in philosophy plus consent of instructor and department chairman.
- Phil. 499.1, 499.2, 499.3. **Seminar in Philosophy.** 3 credits each course. Prerequisite, philosophy major or permission.

## Physical Education

- P.E. 301. **Choreography.** 3 credits. Prerequisite, P.E. 201.1 or consent of instructor.
- P.E. 320. **Aquatic Instruction.** 2 credits. Prerequisite, P.E. 45 or current life saving certificate and 18 years of age.
- P.E. 321. **Football Coaching.** 2 credits.
- P.E. 322. **Wrestling Coaching.** 2 credits.
- P.E. 323. **Basketball Coaching.** 2 credits.
- P.E. 324. **Track Coaching.** 2 credits.
- P.E. 325. **Baseball Coaching.** 2 credits.
- P.E. 326. **Theory and Practice in Sports for Women.** 3 credits. Prerequisite, basic skills, team sports or permission.
- P.E. 327. **Theory and Practice in Dance.** (Secondary Level.) 3 credits. Prerequisites, P.E. 32 and 34, or P.E. 130; or permission.
- P.E. 330. **Methods and Materials for Formal Activities.** 1 credit. Prerequisite, competence in the activities.
- P.E. 331. **Methods and Materials in Individual and Dual Sports.** 1 credit.
- P.E. 332. **Theory and Practice in Dance (Elementary and Intermediate Level.)** 3 credits. Prerequisite, P.E. 130 or permission.
- P.E. 334. **Physical Education Activities for the Elementary School.** 3 credits. Prerequisites (men), International Dance, Basic Skills, or permission; (women), Basic Skills, Team Sports, International Dance, or permission.
- P.E. 335. **Physical Education Methods for Secondary School.** 3 credits.
- P.E. 336. **Methods and Materials for Teaching Team Sports.** 1 credit.
- P.E. 337. **Methods and Materials for Teaching Aquatics.** 1 credit.
- P.E. 338. **Methods and Materials for Teaching Rhythms.** 1 credit.
- P.E. 339. **Methods and Materials for Teaching Gymnastics.** 1 credit.
- P.E. 348. **Athletic Training.** 2 credits.
- P.E. 348W. **Athletic Training for Women.** 2 credits.
- P.E. 352. **Sports Officiating for Women.** 2 credits.
- P.E. 353. **Sports Officiating for Men.** 3 credits.
- P.E. 361. **Physical Education for Handicapped Children.** 3 credits.
- P.E. 423W. **Coaching Women's Basketball.** 3 credits. Prerequisite, P.E. 326 or permission.
- P.E. 440. **Workshop Clinic.** 1 to 6 credits.
- P.E. 442. **Field Work in Physical Education.** 1 to 5 credits.
- P.E. 443. **The Intramural Program.** 2 credits.
- P.E. 444. **Management of Equipment.** 3 credits.
- P.E. 445. **Physical Education Facilities.** 3 credits.
- P.E. 448. **Advanced Athletic Training.** 3 credits.
- P.E. 450. **Sports Education.** 5 credits.
- P.E. 458. **Measurement in Physical Education.** 3 credits.
- P.E. 460. **Safety in Physical Education and Athletics.** 3 credits.
- P.E. 466. **Supervision and Evaluation of Program Planning.** 3 credits.
- P.E. 470. **Trends in Modern Physical Education.** 3 credits.
- P.E. 471. **Philosophy of Elementary School Physical Education.** 3 credits.
- P.E. 480. **Administration in Health and Physical Education.** 3 credits. Prerequisite, P.E. 207.
- P.E. 481. **Public Relations in Health, Physical Education and Recreation.** 2 credits.
- P.E. 499A. **Seminar in Athletics.** 2 credits.
- P.E. 499P. **Seminar in Physical Education.** 2 credits.
- P.E. 521. **Advanced Football Methods.** 3 credits.
- P.E. 523. **Advanced Basketball Coaching.** 3 credits.
- P.E. 524. **Advanced Track Coaching.** 3 credits. Prerequisite, track coaching and experience or permission.
- P.E. 525. **Advanced Baseball Coaching.** 3 credits.

- P.E. 526. **Advanced Methods in Women's Team Sports.** 3 credits.
- P.E. 558. **Methods of Research in Health and Physical Education.** 3 credits. Prerequisites, Ed. 362 or P.E. 458 and Ed. 507.
- P.E. 559. **Analysis of Motion.** 3 credits. Prerequisite, P.E. 450.
- P.E. 561. **Dance in Education.** 3 credits. Prerequisite, P.E. 327.
- P.E. 581. **Advanced Administration in Physical Education in High School and Colleges.** 3 credits. Prerequisite, P.E. 480.
- P.E. 596. **Individual Study.** 1 to 6 credits.
- P.E. 599. **Seminar in Philosophy and Literature in Physical Education.** 3 credits.

## Physics

- Physics 324. **Methods and Materials in Teaching Physics.** 3 credits. Prerequisites, Physics 283 or Physics 341 and 344 or by permission.
- Physics 331. **Astronomy I: Solar System.** 4 credits.
- Physics 332. **Astronomy II: Stars and Galaxies.** 4 credits.
- Physics 337. **Meteorology.** 4 credits.
- Physics 341. **Modern Physics and Modern Physics Lab.** 4 credits. Prerequisite, Physics 161, 162, 163.
- Physics 351, 352. **Mechanics.** 4 credits each course. Prerequisite, Physics 263 or 283 and Math. 271.3.
- Physics 363. **Physical Optics.** 4 credits. Prerequisite, Physics 382.
- Physics 371. **Physical Measurements.** 4 credits. Prerequisite, Physics 161, 162, 163.
- Physics 381, 382. **Electricity and Magnetism.** 4 credits each course. Prerequisite, Physics 263 or 283 and Math. 271.3.
- Physics 384, 385, 386. **Junior Physics Laboratory.** 1 credit each course. Prerequisite, Physics 381, 382, 363. (May be taken concurrently.)
- Physics 395. **Bio. Sci. 395. Impact of Science on Society.** 4 credits.
- Physics 401. **Concepts of Classical Physics.** 3 credits. Prerequisite, open to secondary school teachers.
- Physics 402. **Concepts of Modern Physics.** 3 credits. Prerequisite, open only to secondary school teachers.
- Physics 403. **Experiments in Modern Physics.** 2 credits. Prerequisite, open only to secondary school teachers.
- Physics 441, 442. **Solid State Physics.** 3 credits each course. Prerequisite, Physics 371.

- Physics 454. **Thermodynamics and Statistical Mechanics.** 4 credits. Prerequisites, Physics 352 and Math. 376.3.
- Physics 455, 456. **Atomic and Nuclear Physics.** 3 credits each course. Prerequisite, Physics 471.
- Physics 471. **Quantum Mechanics.** 4 credits. Prerequisites, Physics 352 and Math. 376.3.
- Physics 481, 482, 483. **Mathematical Physics.** 3 credits each course.
- Physics 484, 485. **Senior Physics Laboratory.** 1 credit each course. Prerequisite, Physics 384, 385, 386.
- Physics 496, 497, 498. **Individual Study.** 2-4 credits.
- Physics 499.1, 499.2, 499.3. **General Physics Seminar.** 1 credit each course. Prerequisite, senior standing in Physics.

## Political Science

- Pol. Sci. 321. **The United Nations in the School Program.** 3 credits. Open primarily to teachers, to others by permission.
- Pol. Sci. 342. **Public Opinion and Propaganda.** 2 credits.
- Pol. Sci. 345. **Government, Science, and Technology.** 2 credits.
- Pol. Sci. 348. **Contemporary American Political Parties.** 5 credits.
- Pol. Sci. 350. **Introduction to Public Law.** 4 credits.
- Pol. Sci. 352. **Public Administration.** 3 credits.
- Pol. Sci. 353. **The Legislative Process.** 3 credits.
- Pol. Sci. 374. **Modern World Problems.** 5 credits. Open primarily to teachers, or by permission.
- Pol. Sci. 375. **Comparative Political Systems: Asia.** 4 credits.
- Pol. Sci. 376. **International Organization.** 4 credits.
- Pol. Sci. 378. **Comparative Political Systems: Western Europe.** 4 credits.
- Pol. Sci. 379. **Comparative Political Systems: The Soviet Area.** 4 credits.
- Pol. Sci. 384. **International Politics.** 5 credits.
- Pol. Sci. 385. **The Political Development of International Communism.** 4 credits.
- Pol. Sci. 423. **Communism and the School Curriculum.** 2 credits. Open primarily to teachers, or by permission.
- Pol. Sci. 441, 442, 443. **Senior Seminars on American National Government.** 2 credits each course. Prerequisite, senior standing or consent of instructor.

- Pol. Sci. 444. Political Campaigns and Elections. 3 credits.
- Pol. Sci. 448. Non-Western Political and Economic Organization. 4 credits.
- Pol. Sci. 461. Political Theory I. 4 credits.
- Pol. Sci. 462. Political Theory II. 4 credits.
- Pol. Sci. 463. Political Theory III. 4 credits.
- Pol. Sci. 465. American Political Thought. 4 credits.
- Pol. Sci. 466. Current Issues of American Democracy. 3 credits. Open primarily to teachers, or by permission.
- Pol. Sci. 470, 471, 472. Senior Seminar in International Politics. 2 credits each. Prerequisite, senior standing or consent of the instructor.
- Pol. Sci. 474. International Law. 3 credits.
- Pol. Sci. 475. Communism in the Developing Areas. 4 credits.
- Pol. Sci. 476. Comparative Political Systems: The Developing Areas. 4 credits.
- Pol. Sci. 480. Introduction to Constitutional Law. 3 credits.
- Pol. Sci. 481. The Constitution and Human Rights. 3 credits.
- Pol. Sci. 484. Government and Politics of Southeast Asia. 2 credits.
- Pol. Sci. 485. International Relations in the Far East and Southeast Asia. 4 credits.
- Pol. Sci. 496, 497, 498. Individual Study. 2 to 4 credits.

## Psychology

- Psv. 305. Existential Psychology. 3 credits. Prerequisite, Psy. 100 and Phil. 207, or consent of department chairman.
- Psv. 346. Social Psychology. 4 credits. Meets daily. Prerequisite, Psy. 100.
- Psv. 347. Methods of Attitude and Opinion Measurement. 4 credits. Prerequisite, Psy. 362 and Psy. 346 or consent of department chairman.
- Psv. 350. Emotional Growth of Children. 3 credits. Prerequisite, Psy. 309.
- Psv. 362. Elementary Statistics. 4 credits. (Also listed as Ed. 362.)
- Psv. 373. Psychology of Thought and Language. 4 credits. Prerequisite, Psy. 100.
- Psv. 378. Physiological Psychology. 4 credits. Prerequisite, Psy. 201, with Zool. 152 recommended, and consent of department chairman.
- Psv. 416. Programmed Learning. 3 credits. Prerequisite, Psy. 310. (Also listed as Ed. 416.)
- Psy. 425. Psychology of Reading. 3 credits. Prerequisite, senior standing. (Also listed as Ed. 425.)
- Psy. 444. Tests and Measurements. 4 credits. Prerequisite, Psy./Ed. 362.
- Psy. 445. Clinical and Counseling Psychology. 5 credits. Prerequisite, senior standing.
- Psy. 446. Experimental Personality and Social Psychology. 4 credits. Prerequisite, Psy. 346 and Psy. 362.
- Psy. 447. Psychology of Adolescence. 3 credits. Prerequisite, Psy. 309.
- Psy. 449. Abnormal Psychology. 4 credits. Prerequisite, Psy. 309 and Psy. 205.
- Psy. 450. Experimental Psychology of Perception. 4 credits. Prerequisite, Psy./Ed. 362 with Zool. 270 recommended.
- Psy. 451. Experimental Psychology of Motivation. 4 credits. Prerequisite, Psy./Ed. 362 with Zool. 270 recommended.
- Psy. 452. Experimental Psychology of Learning. 4 credits. Prerequisite, Psy./Ed. 362 with Zool. 270 recommended.
- Psy. 453. Theories of Personality. 5 credits. Prerequisite, Psy. 452 or consent of department chairman.
- Psy. 455. Case Studies in Psychology. 2 credits. Prerequisite, if in Teacher Education, the student must be enrolled as a major or minor in Psychology and have a minimum of 10 hours completed. If in Arts and Science, the student must be enrolled as a major in Psychology and a minor in Education and have completed 10 hours of psychology.
- Psy. 456. Personnel Psychology. 3 credits.
- Psy. 457. Psychology of Exceptional Children. 3 credits. Prerequisite, Sp. Ed. 343 or consent of department chairman.
- Psy. 458. Clerkship in Psychology. 2 credits. Prerequisite, must be enrolled as a major in psychology and have 25 hours completed.
- Psy. 460. Counseling Parents of Exceptional Children. 3 credits. Prerequisites, Sp. Ed. 343 & Psy. /Sp. Ed. 457 or consent of department chairman. (Also listed as Spec. Ed. 460.)
- Psy. 461. History and Systems of Psychology. 5 credits. Prerequisite, Psy. 450 or Psy. 451 or Psy. 452.
- Psy. 463. Special Diagnostic Techniques. 3 credits. Prerequisite, Psy. 205 or consent of department chairman.
- Psy. 467. Maladjusted Children. 3 credits. Prerequisite, Psy./Sp. Ed. 457 and Psy. 205 or consent of department chairman. (Also listed as Sp. Ed. 467.)
- Psy. 469. Advanced Psychological and Educational Statistics. 4 credits. Prerequisite, Psy./Ed. 362. (Also listed as Ed. 469.)



- Psy. 471. Vocational Development Theory.** 3 credits. Prerequisites, Ed. 358 with Psy. 444 recommended. (Also listed as Ed. 471.)
- Psy. 473. Experimental Psychology of Thinking.** 4 credits. Prerequisite, Psy. 362.
- Psy. 475. Instrumentation of Psychology.** 2 credits. One lecture and one two-hour laboratory. Prerequisite, one course in experimental psychology.
- Psy. 476. Comparative Psychology.** 4 credits. Three lectures and one two-hour laboratory. Prerequisites, Psy. 201 and Zool. 152 or consent of department chairman.
- Psy. 477. Neurological Basis of Behavior.** 4 credits. Prerequisite, Psy. 378 or consent of department chairman.
- Psy. 478. Experimental Physiological Psychology.** 4 credits. Prerequisites, Psy. 378, Psy. 477, Zool. 372, or consent of department chairman.
- Psy. 487. Group Processes and Leadership.** 3 credits. (Also listed as Ed. 487.)
- Psy. 488. Group Dynamics and the Individual.** 3 credits. Prerequisite, Psy./Ed. 487 or consent of department chairman. (Also listed as Ed. 488.)
- Psy. 496. Individual Study.** 2-6 credits.
- Psy. 499. Seminar in Psychology.** 1-6 credits.
- Psy. 552. Human Growth and Development, Advanced.** 3 credits. Prerequisite, Psy. 309 or consent of department chairman.
- Psy. 558. Practicum in School Psychology.** 1-15 credits. Prerequisite, approval of department chairman.
- Psy. 559.1, E, I, or S.C. Practicum in Counseling.** 2 credits. To be taken concurrently with Psy. 560. Prerequisite, consent of department chairman. (Also listed as Ed. 559.1.)
- Psy. 559.2, E, I, or S.C. Practicum in Counseling.** 4 credits. Prerequisites, Psy. 560 and Ed./Psy. 559.1. (Also listed as Ed. 559.2.)
- Psy. 560. Theories of Counseling.** 4 credits. Prerequisite, Psy. 453.
- Psy. 561. Group Counseling.** 3 credits.
- Psy. 562. Theories of Learning.** 5 credits. Prerequisite, Psy. 452 or consent of department chairman.
- Psy. 563. Theories of Perception.** 4 credits. Prerequisite, Psy. 450 or consent of department chairman.
- Psy. 564. Individual Testing: Child.** 5 credits. Prerequisites, Psy. 205, Psy./Ed. 362, and Psy. 444.
- Psy. 565. Individual Testing: Adolescent and Adult.** 5 credits. Prerequisites, Psy. 205, Psy./Ed. 362, and Psy. 444.

- Psy. 566. Personality Assessment.** 5 credits. Prerequisites, Psy. 444, Psy. 453, Psy. 564, and Psy. 565.
- Psy. 567. Theories of Motivation.** 4 credits. Prerequisite, Psy. 451 or Psy. 452.
- Psy. 568, 569. Experimental Design.** A two quarter sequence. 3 credits each quarter. Prerequisite, Psy. 469.
- Psy. 571. Family Counseling.** 3 credits. Prerequisite, Psy./Ed. 487 and consent of department chairman.
- Psy. 583.1, 583.2, 583.3. Supervised Field Experience in School Psychology.** 1 credit each quarter. Prerequisite, graduate in School Psychology.
- Psy. 584.1, 584.2, 584.3. Supervised Field Experience in Counseling.** 1 credit each quarter. Prerequisite, all course work for M.Ed. or all work except Psy. 600 and at least half-time employment as a counselor.
- Psy. 590.1, 590.2, 590.3. Current Issues in Psychology.** 3 credits each quarter.
- Psy. 595. Seminar in Psychopathology.** 1-3 credits. Prerequisite, departmental approval.
- Psy. 596. Individual Study.** 1-6 credits. Prerequisite, approval of department chairman.
- Psy. 598.1, 598.2, 598.3. Seminar in Counseling and School Psychology.** 1 credit each quarter. Prerequisite, consent of department chairman.
- Psy. 599.1, 599.2, 599.3. Seminar in Psychology.** 1 credit each quarter.
- Psy. 600. Thesis.** 1-6 credits.

## Recreation

- Rec. 321. Methods and Materials in Recreation.** 5 credits. Prerequisite, Rec. 207.
- Rec. 335. Playground Leadership.** 3 credits.
- Rec. 442. Field Work in Recreation.** 1-5 credits.
- Rec. 449. School Camping.** 3 credits. Prerequisite, Rec. 249.
- Rec. 450. Outdoor Recreation.** 2 credits.
- Rec. 460. The School Recreation Program.** 2 credits.
- Rec. 470. Modern Trends in Recreation.** 3 credits.
- Rec. 480. Administration of Recreation.** 5 credits. Prerequisite, Rec. 321.
- Rec. 489. School Camping for the Classroom Teacher.** 2 credits.
- Rec. 499. Seminar in Recreation.** 2 credits.
- Rec. 571. Modern Trends in Outdoor Education.** 3 credits.
- Rec. 596. Individual Study.** 1-6 credits.

## Romance Languages

Romance Languages 401. Introduction to Romance Linguistics. 3 credits. Prerequisite, equivalent of two years of college study of a Romance language.

## Russian

Russ. 331. 19th Century Russian Literature I. 4 credits. Prerequisite, Russian 253 or equivalent.

Russ. 332. 19th Century Russian Literature II. 4 credits. Prerequisite, Russian 253 or equivalent.

Russ. 333. 20th Century Russian Literature I: Pre-Soviet Period. 4 credits. Prerequisite, Russian 253.

Russ. 334. 20th Century Russian Literature II: Soviet Period. 4 credits. Prerequisite, Russian 253.

Russ. 361, 362, 363. Intermediate Conversation and Composition. 2 credits each quarter. Courses must be taken in sequence. Prerequisite for Russian 361, Russian 263 or equivalent. Scheduled so that they may be taken concurrently with Russian 331, 332, 333 respectively.

Russ. 455. Russian Poetry of the 19th and 20th Centuries. 3 credits. Prerequisite, 8 hours of 300 level Russian literature or equivalent.

## Safety Education

Safety Ed. 437. General Safety Education. 3 credits.

Safety Ed. 455. Driver and Traffic Safety Education. 3 credits.

Safety Ed. 456. Driver and Safety Education. 3 credits. Prerequisite, Safety Ed. 455 and experience.

Safety Ed. 457. Highway Safety Traffic Control. 3 credits.

Safety Ed. 461. Organization and Supervision in Traffic Safety Education. 3 credits. Prerequisites, Safety Ed. 455 and 456.

## Science Education

Sci. Ed. 322. Science Education in the Elementary School. 3 credits.

Sci. Ed. 324. Science Education in the Secondary Schools. 3 credits.

Sci. Ed. 424. Methods and Materials in Teaching Biology. 4 credits. Prerequisite, 30 credits in biology and Sci. Ed. 324 or permission.

Sci. Ed. 440. Workshop. 1-6 credits.

Sci. Ed. 440C.O.E. Workshop. Conservation and Outdoor Education. 2½ credits each course.

Sci. Ed. 442, 443. Laboratory Experience in Teaching Science. 2 credits each course. Prerequisite, 15 credits in the science involved and permission.

Sci. Ed. 496, 497. Individual Study. 2-4 credits each course.

## Social Science

Soc. Sci. 420. Methods and Materials in the Social Sciences—Elementary. 3 credits.

Soc. Sci. 440. Workshop. 1-6 credits.

Soc. Sci. 521. Social Science Methods and Materials. 2 credits. Prerequisite, B.A. degree with graduate guided electives in the social sciences and permission.

## Sociology

Soc. 346. Crime and Delinquency in the United States. 5 credits. Prerequisite, Soc. 107.

Soc. 348. Marriage and Families. 5 credits.

Soc. 350. Social Theory I. 4 credits.

Soc. 355. Culture and Personality. 3 credits.

Soc. 360. The Community. 3 credits.

Soc. 367. Sociology of Religion. 3 credits.

Soc. 370. Social Change. 5 credits.

Soc. 380. Demography and Ecology. 5 credits.

Soc. 400. Social Institutions. 5 credits.

Soc. 415. Urban Sociology. 4 credits.

Soc. 445. Social Stratification. 3 credits. Prerequisite, Soc. 107.

Soc. 448. Political Sociology. 4 credits.

Soc. 450. Social Theory II. 4 credits. Prerequisite, Soc. 350.

Soc. 455. Collective Behavior. 5 credits.

Soc. 465. Methods of Social Research. 3 credits. Prerequisites, Soc. 107 plus 10 additional sociology credits or permission of the instructor.

Soc. 470. Contemporary Social Thought. 4 credits. Prerequisite, Soc. 450 or permission.

Soc. 475. Communication and Human Relations. 3 credits.

Soc. 481. Philosophy of the Social Sciences. 4 credits.

Soc. 495. Research Seminar in Sociology. 2 credits.

Soc. 496. Individual Study. 2-3 credits. Prerequisite, ten hours or more in sociology.

## Spanish

- Span. 351, 352, 353. **Survey of Spanish Literature.** 3 credits each quarter. Prerequisite, Spanish 253 or equivalent.
- Span. 361, 362, 363. **Intermediate Conversation and Composition.** 2 credits each quarter. Courses must be taken in sequence. Prerequisite for 361, 263 or equivalent. Scheduled so that they may be taken concurrently with Spanish 351, 352, 353, respectively.
- Span. 426. **Medieval Spanish Literature.** 4 credits. Prerequisite, Spanish 351 or equivalent.
- Span. 427. **Spanish Renaissance Literature.** 4 credits. Prerequisite, Spanish 351 or equivalent.
- Span. 430. **Spanish Romanticism.** 3 credits. Prerequisite, Spanish 353 or equivalent.
- Span. 435. **Realism and Naturalism.** 5 credits. Prerequisite, Spanish 353 or equivalent.
- Span. 441. **Spanish Grammar for Teachers.** 3 credits. Prerequisite, 2 years of college Spanish or equivalent.
- Span. 448. **Cervantes.** 3 credits. Prerequisite, Span. 352 or permission of the instructor.
- Span. 450. **The Drama of the Golden Age.** 3 credits. Prerequisite, Span. 352 or permission of the instructor.
- Span. 451, 452, 453. **Survey of Spanish-American Literature.** 3 credits each quarter. Prerequisite, Spanish 353 or permission of the instructor.
- Span. 455. **The Generation of 1898.** 3 credits. Prerequisite, Span. 353 or permission of the instructor.
- Span. 457. **The Modernista Movement in Spanish-American Literature.** 3 credits. Prerequisite, Spanish 353 or permission of instructor.
- Span. 458. **The Contemporary Spanish-American Novel.** 3 credits. Prerequisite, Spanish 353 or permission of the instructor.
- Span. 459. **Contemporary Spanish-American Poetry.** 3 credits. Prerequisite, Spanish 353 or permission of the instructor.
- Span. 461, 462, 463. **Advanced Conversation and Composition.** 2 credits each quarter. Prerequisite for 461, 363 or equivalent.
- Span. 496, 497, 498. **Individual Study.** 2 credits each quarter. Prerequisite, Spanish 351, 352, 353 or equivalent and permission of the instructor and of the department chairman.

## Special Education

- Spec. Ed. 307. **Introduction to Special Education.** 2 credits.
- Spec. Ed. 343. **Educating Exceptional Children.** 3 credits. Prerequisite, Psy. 309 or permission.
- Spec. Ed. 413. **Psychology and Education of the Mentally Retarded.** 4 credits. Prerequisite, Psy. 309, Spec. Ed. 343.
- Spec. Ed. 414. **Curriculum and Problems of Instruction for the Mentally Handicapped.** 4 credits.
- Spec. Ed. 415. **Introduction to Causes of Behavior Problems.** 4 credits. Prerequisite, Spec. Ed. 343.
- Spec. Ed. 416. **Education of Disturbed and Conduct-Problem Children.** 4 credits. Prerequisite, Spec. Ed. 415.
- Spec. Ed. 418. **Problems of Teaching Trainable Mentally Retarded Children.** 4 credits. Prerequisite, Spec. Ed. 343 or by permission of instructor.
- Spec. Ed. 421. **Principles of Remedial Education.** 4 credits.
- Spec. Ed. 422. **Diagnostic Techniques in Remedial Education.** 4 credits. Prerequisite, Spec. Ed. 421, Ed. 322, and Ed. 323.
- Spec. Ed. 425. **Educating the Slow Learner.** 3 credits. Prerequisite, Ed. 442, teaching experience or permission.
- Spec. Ed. 429. **Remedial Arithmetic.** 2 credits. Prerequisite, Ed. 314.
- Spec. Ed. 433. **The Disadvantaged Child.** 4 credits.
- Spec. Ed. 437. **The Gifted Child and Society.** 4 credits.
- Spec. Ed. 438. **Remedial Reading.** 3 credits. Prerequisites, Ed. 314 and Ed. 322 or teaching experience.
- Spec. Ed. 440.0 to 440.9. **Workshop.** 1 to 6 credits.
- Spec. Ed. 446. **Directed Observation.** 3 credits. Prerequisite, teaching experience or junior standing.
- Spec. Ed. 448.0, 448.1, 448.2, 448.3, 448.4, 448.5, 448.6. **Practicum.** 3-9 credits. Prerequisite, permission of the department.
- Spec. Ed. 457. **Psychology of Exceptional Children.** 3 credits. Prerequisite, Spec. Ed. 343 or permission.
- Spec. Ed. 460. **Counseling Parents of Exceptional Children.** 3 credits. Prerequisite, Spec. Ed. 343, Spec. Ed. 457, or permission.
- Spec. Ed. 463. **Special Diagnostic Techniques.** 3 credits. Prerequisite, Psy. 205 or by permission of the Education Department.
- Spec. Ed. 467. **Maladjusted Children.** 3 credits. Prerequisite, Psy. 205 or Spec. Ed. 457 or permission.

- Spec. Ed. 490. Seminar in Special Education Problems. 4 credits. Prerequisite, Spec. Ed. 448.
- Spec. Ed. 496, 497. Individual Study. 2 credits each.
- Spec. Ed. 499. Seminar in Special Education. 4 credits.
- Spec. Ed. 585. Administration and Supervision of Special Education Programs. 4 credits. Prerequisite, Ed. 585 or Ed. 587.
- Spec. Ed. 596. Individual Study. 1-6 credits.

## Speech and Drama

### General

- Sp. 420. Teaching Speech in the Elementary School. 3 credits.
- Sp. 428. Teaching Speech in the Secondary School. 5 credits. Prerequisite, twenty credits in speech and drama, and the approval of the instructor.
- Sp. 440. Workshop. 1-6 credits.
- Sp. 443. Advanced Oral Interpretation. 3 credits. Prerequisite, Sp. 243.
- Sp. 445. Psychology of Speech. 4 credits.
- Sp. 446. Oral Interpretation of Children's Literature. 5 credits.
- Sp. 478. Speech Correction and Classroom Teaching. 3 credits.
- Sp. 496. Individual Study. 2 credits. Prerequisite, sufficient background in speech, drama, or speech and hearing to enable the student to carry on an individual project.
- Sp. 507. Introduction to Graduate Study. 3 credits.
- Sp. 596. Individual Study. 2-4 credits. Prerequisite, graduate status, consent of faculty member in charge.
- Sp. 600. Thesis. 3 or 6 credits.

### Radio and Television

- R-TV. 310, 311, 312. Practical Radio. One credit each course.
- R-TV. 314. Radio and Television Announcing. 3 credits. Prerequisite, R-TV 215, Speech 282 or consent of instructor.
- R-TV. 315. Advanced Radio and Television Production. 3 credits. Prerequisite, R-TV 215.
- R-TV. 409, 410, 411. Radio and Television Project. 1 credit each quarter.
- R-TV. 420, 421, 422. Practical Television. 2 credits each quarter.
- R-TV. 440. Workshop. 1-6 credits.
- R-TV. 450. Radio and Television in Today's World. 3 credits.

## Rhetoric and Public Address

- Sp. 340. Classical Rhetoric. 4 credits.
- Sp. 341. Medieval and Renaissance Rhetoric. 4 credits.
- Sp. 342. Modern Rhetoric. 4 credits.
- Sp. 345. Advanced Public Speaking. 4 credits. Prerequisite, Sp. 201.
- Sp. 350. Persuasion. 4 credits. Prerequisite, Sp. 201 and 250.
- Sp. 441. Speech Criticism. 4 credits.
- Sp. 451. Greek and Roman Public Address. 5 credits. Prerequisite, Sp. 441.
- Sp. 452. British Public Address. 5 credits. Prerequisite, Sp. 441.
- Sp. 453. American Public Address. 5 credits. Prerequisites, Sp. 441.
- Sp. 497. Seminar in Rhetoric and Public Address. 4 credits. Prerequisite, permission of the instructor.

## Speech Pathology and Audiology

- Sp. 364. Stuttering Theory and Therapy. 4 credits. Prerequisite, Sp. 277, 282, and 290.
- Sp. 365. Audiology. 4 credits. Prerequisite, Sp. 277 and 290.
- Sp. 376. Articulation. 4 credits. Prerequisite, Sp. 277, 282, 290.
- Sp. 381. The Cleft Palate. 2 credits.
- Sp. 388, 389, 390. Clinical Practicum. 2 credits each quarter. Prerequisite, Sp. 277, 282, and one of the following: Sp. 364, 365, or 376 plus permission of the instructor.
- Sp. 445. Psychology of Speech. 4 credits.
- Sp. 455. Rehabilitation of the Hard of Hearing. 4 credits. Prerequisites, Sp. 365, 467.
- Sp. 460. Childhood Language Disorders. 4 credits.
- Sp. 465. Hearing and Communication. 4 credits.
- Sp. 467. Audiometry. 4 credits. Prerequisite, Sp. 365.
- Sp. 471. Voice Disorders. 4 credits. Prerequisite, permission of instructor.
- Sp. 480. Therapy for Aphasia. 3 credits. Prerequisite, Sp. 277.
- Sp. 491. Diagnostic Methods. 4 credits. Prerequisite, 4 credits in clinical practicum or consent of instructor.
- Sp. 492. Seminar in Organic Speech Problems. 4 credits. Prerequisite, 4 credits in clinical practicum.
- Sp. 499. Advanced Anatomy and Neurology of Speech. 4 credits. Prerequisite, permission of instructor.
- Sp. 555. Psycholinguistics. 4 credits.

- Sp. 563. Seminar in Stuttering. 4 credits.  
 Sp. 567.1 Seminar in Audiology. 4 credits.  
 Sp. 567.2. Seminar in Audiometry. 4 credits.  
 Sp. 588.1, 588.2, 588.3. Clinical Practicum. 1-2 credits each quarter. Prerequisite, permission of instructor.

## Theatre and Drama

- Sp. 312. Creative Dramatics. 4 credits.  
 Sp. 329. Directing. 3 credits.  
 Sp. 362. Practice in Creative Dramatics. 4 credits. Prerequisite, Sp. 312.  
 Sp. 363.1. History of Theatre. 3 credits.  
 Sp. 363.2. History of Theatre. 3 credits.  
 Sp. 363.3. History of Theatre. 3 credits.  
 Sp. 369. Advanced Acting. 3 credits. Prerequisite, Sp. 269 and/or consent of instructor.  
 Sp. 371. Greek and Roman Drama. 3 credits.  
 Sp. 373. American Drama. 3 credits.  
 Sp. 410. Play Writing. 4 credits.  
 Sp. 429. Advanced Directing. 3 credits. Prerequisite, Sp. 329.  
 Sp. 444. Interpreting Shakespeare. 4 credits.  
 Sp. 470. Recent Plays. 3 credits.  
 Sp. 473. Children's Theatre. 3 credits.  
 Sp. 474. British Drama. 3 credits.  
 Sp. 475. Continental European Drama. 3 credits.  
 Sp. 479. Restoration and Eighteenth Century Drama. 3 credits. (Also listed as Eng. 479.)  
 Sp. 498. Seminar in Theatre and Drama. 2 to 4 credits.

## Technology and Industrial Education

- T.I.E. 356. Sheet Metal. 3 credits.  
 T.I.E. 357. Welding and Forging. 4 credits.  
 T.I.E. 365. Engineering Drawing II. 4 credits. Prerequisite, T.I.E. 165.  
 T.I.E. 374. Basic Electronics. 4 credits. Prerequisite, T.I.E. 269 or Physics 162.  
 T.I.E. 375. Industrial Design. 3 credits.  
 T.I.E. 380. History and Philosophy of Industrial Education. 3 credits.  
 T.I.E. 390. Basic American Industries. 3 credits.  
 T.I.E. 430. Industrial Education. 3 credits.  
 T.I.E. 431. Selection and Development of Instructional Materials. 3 credits.  
 T.I.E. 432. Analysis Techniques. 3 credits.

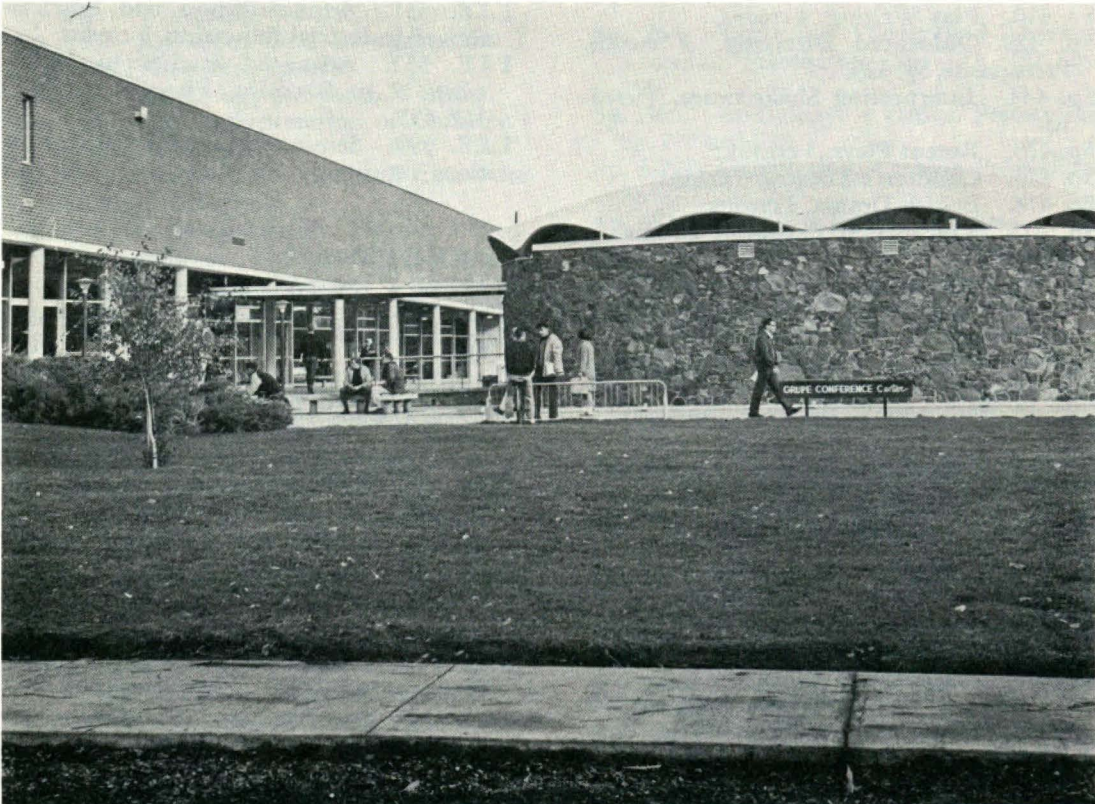
- T.I.E. 433. Industrial Education Laboratory Planning. 2 credits.  
 T.I.E. 440. Workshop. 1 to 6 credits.  
 T.I.E. 448. Finishing. 2 credits.  
 T.I.E. 450. Advanced Furniture Construction. 5 credits. Prerequisite, T.I.E. 250.  
 T.I.E. 455. General Metals II. 5 credits. Prerequisite, T.I.E. 255.  
 T.I.E. 465. Descriptive Geometry. 3 credits. Prerequisite, T.I.E. 165 and Math. 163.  
 T.I.E. 466. Architectural Drawing. 4 credits. Prerequisite, T.I.E. 165.  
 T.I.E. 474. Intermediate Electronics. 4 credits. Prerequisite, T.I.E. 364.  
 T.I.E. 491. Evaluation in Industrial Education. 3 credits.  
 T.I.E. 492. Industrial Safety. 3 credits.  
 T.I.E. 496, 497, 498. Individual Study. 2 credits each. Prerequisite, approval of the instructor and chairman of the department.  
 T.I.E. 550. Advanced Studies in Woodworking. 2 to 5 credits. Prerequisite, T.I.E. 450.  
 T.I.E. 531. Administration and Supervision of Industrial Education. 3 credits.  
 T.I.E. 555. Advanced Studies in Metalwork. 2 to 5 credits. Prerequisite, T.I.E. 357, 455.  
 T.I.E. 599. Seminar in Industrial Education. 3 credits.

## Zoology

- Zool. 311. Cold-blooded Vertebrates. 5 credits. Prerequisite, one year of college biology.  
 Zool. 345. Ornithology. 5 credits. Prerequisite, ten hours of biological science.  
 Zool. 348. General Vertebrate Embryology. 5 credits. Prerequisite, Bio. Sci. 112.  
 Zool. 351, 352. Comparative Anatomy of Chordates. 4 credits each course. Prerequisite, Bio. Sci. 112.  
 Zool. 361. Invertebrate Zoology. 5 credits. Prerequisite, Bio. Sci. 112 or permission of instructor.  
 Zool. 362. General Entomology. 3 credits. Prerequisite, Bio. Sci. 112 or permission.  
 Zool. 372. Zoophysiology. 5 credits. Prerequisites, Zool. 152 and Chemistry 360.  
 Zool. 380. Parasitology. 5 credits. Prerequisite, Bio. Sci. 112.  
 Zool. 381. Protozoology. 4 credits. Prerequisite, Bio. Sci. 112.  
 Zool. 435. Mammalogy. 5 credits. Prerequisite, Bio. Sci. 112.  
 Zool. 436. Herpetology. 4 credits. Prerequisite, one year of zoology.

- Zool. 437. Ichthyology.** 4 credits. Prerequisite, one year of zoology.
- Zool. 445. Avifauna of Washington.** 4 credits. Prerequisite, Zool. 345.
- Zool. 451. Selected Studies in Zoology.** 3 credits. Prerequisite, permission of instructor.
- Zool. 470. Advanced Physiology.** 5 credits. Prerequisites, Zool. 372 and one quarter of organic chemistry or biochemistry.
- Zool. 471. Histology.** 4 credits. Prerequisite, Zool. 152.
- Zool. 472. Natural History of the Vertebrates.** 5 credits.
- Zool. 473. Animal Ecology.** 4 credits. Prerequisite, Zool. 152 or Bot. 161.

- Zool. 474. Zoogeography.** 4 credits.
- Zool. 475. Ethology.** 4 credits. Prerequisite, Zool. 372.
- Zool. 496, 497. Individual Study.** 2-4 credits each course.
- Zool. 511. Advanced Herpetology.** 4 credits. Prerequisite, permission of instructor.
- Zool. 512. Advanced Ichthyology.** 4 credits. Prerequisite, permission of instructor.
- Zool. 548. Experimental Embryology.** 5 credits. Prerequisite, Zool. 348 and Chem. 360 or 362.
- Zool. 596, 597. Individual Study.** 2-4 credits each course.
- Zool. 600. Thesis.** 1-6 credits.



CENTRAL WASHINGTON STATE COLLEGE

Ellensburg

APPLICATION FOR ADMISSION

to

Master's Degree Program

Name ..... Date .....

Maiden Name or Religious Name .....

Permanent Address ..... Street or Box Number ..... City ..... State ..... Zip Code .....

Date and Place of Birth ..... Telephone No. ....

Colleges or Universities Attended ..... Dates ..... Degrees .....  
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Undergraduate Preparation: Major ..... Minor(s) .....

Professional Experience:

Place ..... Dates ..... Position ..... Name of Supervisor .....  
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Degree Program to be attempted (M.A., M.Ed., M.S.): .....

Field of Specialization .....

PLEASE COMPLETE THE FOLLOWING:

Date .....

Name ..... Last ..... First ..... Middle ..... Maiden .....

Address ..... Street or Box Number ..... City ..... State ..... Zip Code .....

Degree now held ..... Date Granted .....

Name of institution granting degree .....

Have you previously attended C.W.S.C. .... When .....

When do you plan to attend C.W.S.C. .... Quarter ....., 19....

This application does not constitute application for admission to the College. Please check with the Office of Admissions.